MicroWin 2000EX

Operating Manual

September, 2002

MicroWin 2000EX
Rev B
For S1000EX Dialer

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MICROTEL

206 West Judge Perez Drive
Chalmette, Louisiana 70043
504/276-0571
Fax: 504/276-0574
www.microtel-inc.com
Microtel2@aol.com

Record of Changes

Rev	Date	Changes	Submitted By
-	January 2002	Original Document	Berk Ehret
A	March 2002	Sheet 68, Changed command from 0*50* to 0**50*	
B	September 2002	Completely Revised	

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Introduction

Thank you for choosing **MicroWin 2000EX**.

MicroWin 2000EX is a software supplement for **Microtel Series 1000EX** dialers. This is a man-machine interface in Windows from which one can monitor and configure one or more **Series 1000EX** dialers.

This software doesn't completely replace the need for a touch-tone telephone. It simply gives the user an easier, more visual method of accessing a **S1000EX** dialer's status and configuration.

Dialer Requirements

MicroWin 2000EX software will only work with **Series 1000EX** dialers.

Upgrading a Series 1000 Dialer

A **S1000** dialer must be returned to the factory for an upgrade in order to work with **MicroWin 2000EX** software.

System Requirements

- **Windows 95**, **Windows 98**, **Windows Me, Windows NT, and Windows XP** Compatible
- 32 Megabytes of RAM
- At least 10 Megabytes of space on the computer's hard drive

Computer Speed
With a **486**, expect it to be a little slow.
With a low-end **Pentium-75**, performance is acceptable.
With a **Pentium-100** or better, performance will be quite nice.

Requirements Connecting Remotely Using a Modem
Connecting remotely will be done with a 300 to 2400 baud Hayes-compatible modem.

Newer modems (14.4, 28.8, 33.6, and 56K) will work just fine.

Please note that some modems require special initialization strings to work properly at these speeds. See your modem manual if you are having problems.

Requirements Connecting Locally Using a Serial Cable
Connecting locally will be done with a serial cable from a computer Com Port to a **S1000EX**'s Printer Port located on the front of the dialer. The side of the cable that will connect to the dialer will have a **9-Pin Female** connector. The administrator will need to determine the type of connector for the other end of the cable that goes to the computer Com Port.

Do **NOT** use a Null Modem cable.

Computer Com Ports
Most computers come with **Com Ports 1** and **2**. Determine which ports are in use and what they are used for. For example, **Com 1** could be used for a mouse and **Com 2** for a modem.

The computer Com Ports can be used interchangeably for either **Modem** communication or **Local** serial communication, depending on how the hardware is setup. When used locally, the computer will be plugged in straight from the computer to the front of the dialer. When used as a modem, the Com Port will be connected to a modem that can be used to call-out to or accept call-ins from an **S1000EX** dialer.

Software Installation

Windows 95 / 98 / ME / XP / NT /
Before installing the software, check to make sure that all other programs are closed. This includes all TSRs, like the **Microsoft Office** quick toolbar.

If this is not the first time installing **MicroWin 2000EX**, it will **need** to be either installed to a different directory, or first the old **MicroWin 2000EX** directory (default is **C:\Program Files\MWIN2000EX**) will need to be unistalled and deleted. If installed over an old install, the new install will **not** be copied over the old one.

To Uninstall MicroWin 2000EX:

1. Select the Start button and go to Setting tab.
2. Select **Control Panel**.
2. Select **Add/Delete Programs**.
3. Find **MicroWin 2000EX** and seect it.
4. Select **Add/Remove** button.

To install MicroWin 2000EX:

1. Insert **MicroWin 2000EX** CD in CD Drive.
2. Open Windows Explorer.
3. Select CD Drive and Double Click Setup.exe.

If the installation exits saying that it cannot do the install because of something else running, make sure to close down **all** other programs and restart the installation.

If the installation is canceled in the middle, the installation will need to be restarted from the beginning.

While the installation is being done, an icon labeled **MicroWin 2000EX** will be created in the Program Menu. To run the software, double click this icon.

Starting MicroWin 2000EX

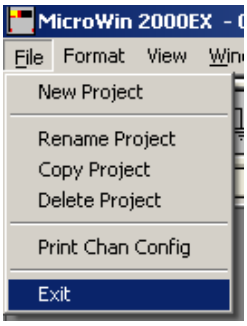
Serial Number

The first time **MicroWin 2000EX** is started, it will prompt you to enter the serial number. The serial number is located on the "**MicroWin 2000EX** Setup Instructions" sent with **MicroWin 2000EX** software. Once the serial number is accepted, **MicroWin 2000EX** will run. It will only ask for the serial number the first time you attempt to run the program.

To run **MicroWin 2000EX**, select the **Start** button then **Programs**. Select the **MicroWin 2000EX** folder then select **MicroWin 2000EX**

Exiting MicroWin 2000EX

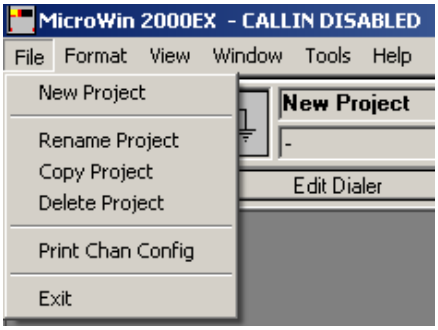
To exit **MicroWin 2000EX**, select the **Exit** menu option from the menu bar . This will display a dialog box making sure that quitting is the desired action. Select **OK**.



Menu Options

Menu Bar
This is located on the top of a form right under the title bar. The following are brief descriptions of what they are for.

File



New Project
Type the name of the New Project to be added. Standard filename format must be used, no periods are acceptable in a file name and the name is limited to 15 character and spaces.

Rename Project
A project must be selected prior to renaming it. Select the Project to be renamed and choose Rename Project from the file drop down box. The following screen will appear, at which time simply type in the New Project name and select OK.

Copy Project
When a Project is copied, the New Project will be a duplicate of the original.

A good way of configuring multiple dialers with similar configurations is by making a dialer configuration template and then copying this Project template whenever another similar dialer is needed.

Delete Project
When an Project is no longer needed, simply select this Project by clicking in the blue background of the selected project's title bar and choose Delete from the File drop down box. An entry that is currently connected will not be able to be deleted.

Print Chan Config
Select the dialer whose configuration is to be printed and select Print Chan Config from the file drop down box.

Exit
This selection allows the user to exit **MicroWin 2000EX**. Prior to exiting form the application, disconnect from any dialer to which **MicroWin 2000EX** is connected.

Format

All Channels
Displays all channels 1 thru 41.

Used Channels
Displays only configured channels.

View

Archive
Displays transferred Archives.

SnapShots
Displays taken SnapShots.

Window

Cascade
Arranges the various projects in a cascaded fashion.

Arrange Minimized
Minimized the various projects along the left border of the desktop.

NOTE: While projects are in the minimized state, should **MicroWin 2000EX** receive a call from a dialer, the horn will sound and the background color of the project calling will change to red and will flash on and off.

Tools

Log Modem
Selecting this will create a file named Dial_Debug.txt that will log all **MicroWin 2000EX** actions. The file will be located in the MWin2000EX directory in the Debug folder.

Reset Dialer
Warning: Selecting this will reset the S1000EX dialer to factory default. You must be connected to a S1000EX for this to work.

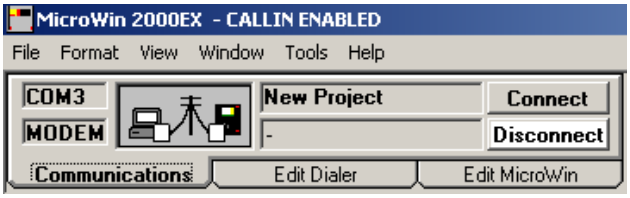
Help

About Dialer
Displays **S1000EX** dialer information.

About MicroWin
Displays **MicroWin 2000EX** Version and Serial Number.

Menu Tabs
These are located on the top of a form right under the menu bar. The following are brief descriptions of what they are for.

Communications
Connect or **Disconnect** from dialer.



Edit Dialer
Edit a dialer's System Setup, Calendar Setup, Telephone Setup, Point Setup, and Archiving Setup.

Edit MicroWin
Enable or Disable **Auto Answer** or **Callouts**.
Select **Com Port**

Setup MicroWin 2000EX to Connect to a S1000EX

MicroWin 2000Ex can connect to a **S1000EX** in two different ways, **Modem** or **Local**. You must choose the appropriate **Com Port** (**1-4**) and **Com Type** (**Modem** or **Local**).

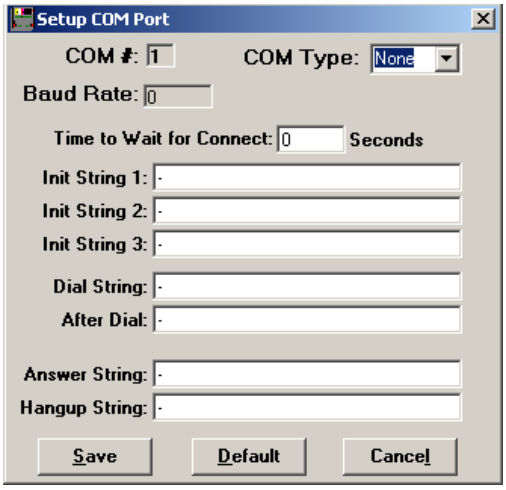
Start **MicroWin 2000Ex** and select the **Edit MicroWin** tab.

Select the appropriate **Com Port.**

Com Port
Com Ports 1-4 correspond to the 4 computer ports on your computer. Most computers have at least Com1 and Com2.

MicroWin 2000EX can detect if the selected port is a valid port or not, but it cannot detect if it is the **Modem** or **Local** port. When **MicroWin 2000EX** detects an invalid port the following form will be displayed.

Selecting Com Type



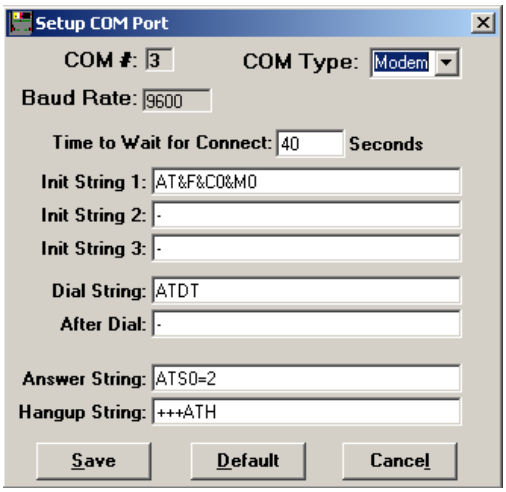
Select the appropriate **Com Type** from the drop down menu. The **Modem** and **Local** choices are shown below. After selecting the appropriate **Com Type** select **Save.**

NOTE: When selecting the **Com Type MicroWin 2000EX** will show default settings on the **Setup COM Port** form. In most cases these default settings will work.

Modem
This port will be used to connect **MicroWin 2000EX** through a telephone line to a **S1000EX** with a modem.

NOTE To connect **MicroWin 2000EX** to a **S1000EX**, the **S1000EX** will need to be put in **Data Answer Mode**. To enable it, type the command **0**581***. This will allow the dialer to answer as a modem. Even with the **Data Mode Enabled**, a user can still make a Voice call-in to the system. While in **Data Mode**, the dialer will first try to answer a call-in as a modem (i.e. the **S1000EX** will output an answer carrier tone). If it wasn't able to connect to a modem after about 10
seconds, it will assume that a person has called it and speak as if Data Mode was Disabled.

Com Type Modem Settings



Baud Rate
This indicates the speed the **Modem** will call out at. The port always connects at **9600.**

Time to Wait For Connect
When a callout is made, the modem picks up, dials the number and waits for an answer. This setting is the amount of time to wait for this answer.

Some modems will time out and hangup if no connect is found after some period of time. If this needs to be extended, see your modem manual for details.

Modem Strings
These options are here because not all modems act the same or are programmed the same. If problems occur with a modem, entering the appropriate modem strings should fix these. The following also show the defaults which will work for most modems.

The **Init Strings** are sent to the modem before an actual callout is made. Each command expects an **OK** from the modem before continuing on.

Init String 1: **Default: AT&F&C1&M0**
Init String 2: **Default: <Blank>**
Init String 3: **Default: <Blank>**

The **Dial String** is sent to the modem appended with the phone number that is getting called. The default is **ATDT**.

The **Answer String** is sent to the modem when **MicroWin 2000EX** senses that the phone is ringing. It causes the modem to answer the phone. The default is **ATS0=2**.

The **Hangup String** is sent to the modem when a normal drop in DTR doesn't hang the modem and dialer up. Initially, the string '+++' is sent and then the Hangup String. The default is **ATH**.

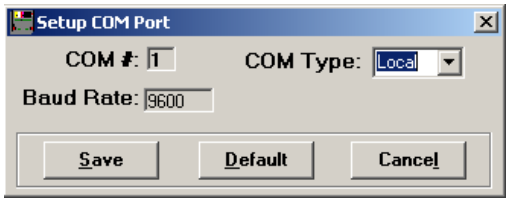
Avoid COM Port Conflicts
Remember that when **MicroWin 2000EX** is using a Com Port, make sure that other programs are **NOT** setup to use them. Having multiple programs using the same Com Ports at the same time could cause conflicts which may have undesirable effects.

This system will run concurrently with other software. Software that may cause conflicts with **MicroWin 2000EX** could be other communication software. A conflict could arise when more than one program tries to use the same COM Port. For example, when an internet browser tries to use the same modem that is used by **MicroWin 2000EX**, a port conflict will arise.

Local
This port will be used to connect to a **S1000EX**'s **Printer Port** using a standard serial cable. Do **Not** use a Null Modem Cable.

NOTE: If this **S1000EX** has been setup to print to a local printer, the Printer Port setting will need to be changed. Printing can be disabled by typing **0******53***.

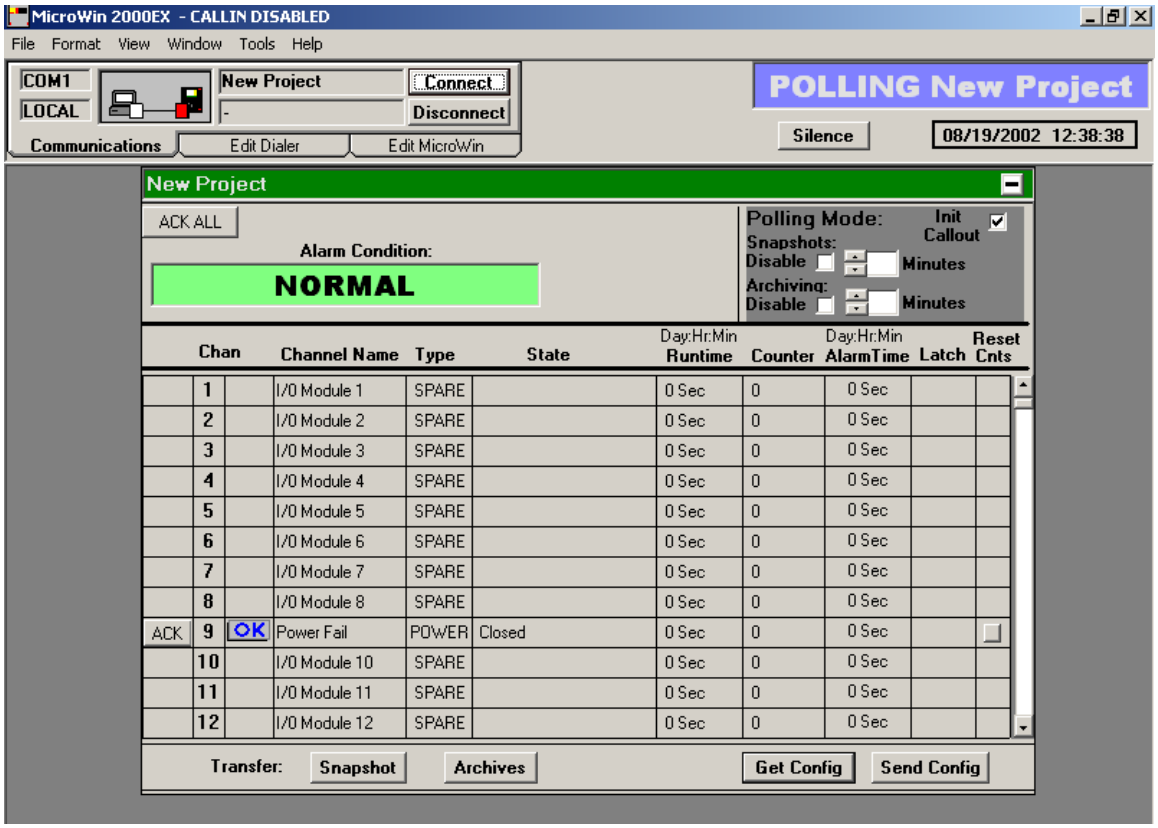
Com Type Local Settings



Baud Rate
The port always connects at **9600.**

Connect MicroWin 2000EX to a S1000EX

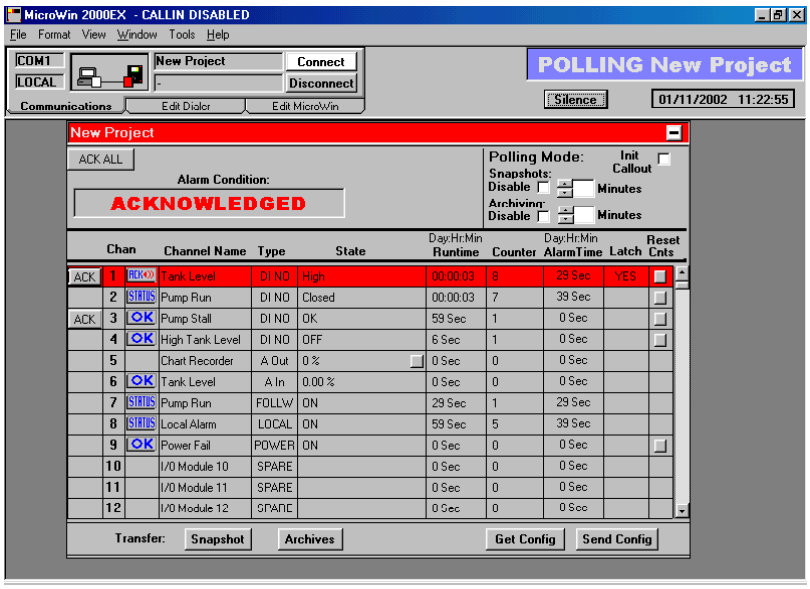
Select the project by clicking in the blue background of the project's title bar. To open the New Project, left click in the small square in the upper right corner of the New Project's title bar. Connect to the dialer either **Local** or **Modem**. Select the **Communications** tab on the desktop and assuming the correct port has been chosen. Select **Connect**. Once the current entry is connected to its associated dialer, the **Realtime Data Page** will display the dialer's realtime data.



After choosing **Connect** communications will commence. If all has been properly setup, the picture in the upper right hand corner will indicate **POLLING "Project Name"** and after a little handshaking, the dialer's realtime status information will start being displayed and will update every 1 to 3 seconds.

If a problem occurs while connecting or a dialer alarm condition is present once connected, an alarm signal may be sounded. To silence this alarm, click on the **Silence** button on the desktop.

Realtime Data Form



ACK ALL
When MicroWin 2000EX connects to a dialer depressing this button on the real time page acknowledges all channels that are presently in the alarm state.

ACK
The ACK button is available on any channel configured to call on alarm. Should MicroWin 2000EX be connected locally or be called by a dialer which has an alarm condition simply press the ACK button to acknowledge the alarm. When the ACK button is depressed, the flashing shall stop and the channel will be illuminated red, in a steady state. When the alarm condition is removed, the channel resumes its original color.

Silence
When an alarm occurs the computer's horn shall sound press the Silence button on the desktop to silence the horn.

Channel Name
This tells the channel name. To the left of the same column is a picture, which represents the current alarm condition for this channel.

For a **Status Channel**:
STATUS The channel is **not setup for alarm callouts**. Outputs also appear as a Status Channel.

For a **Call On Alarm Input Channel**:
OK The channel is currently in a **normal state**
The channel is currently in an **unacknowledged alarm state**
ACK The channel alarm condition is currently **acknowledged**

For a **Follow Channel**:

FOLLOW The channel is setup to follow another channel's state. Its state depends on the channel that it's following.

Type
This tells the type of this channel.

Digital Types:
DI NO Digital Input Normally Open
DI NC Digital Input Normally Closed
DO Digital Output
DO LA Digital Output Local Alarm
Power Power Fail (Normally Closed)

Digital Output Follow Types:
FNone Follow None – Follow Disabled
Fx Follow Channel **x** State
FxFault Follow Channel **x** Fault Condition
FxAlarm Follow Channel **x** Alarm Condition
FxFill Follow Channel **x** – Fill Algorithm (Close at Low Setpoint, Open at High Setpoint)
FxEmpty Follow Channel **x** – Empty Algorithm (Close at High Setpoint, Open at Low Setpoint)

Analog Types:
AO Analog Output
AI Analog Input

For a full description of each of these channel types, see section **Editing an I/O Point**.

State
The channel status information is shown according to how the dialer channel was setup. If it is an analog channel, it will be the scaled value. If it is a digital channel, the label for whether it is **Opened** or **Closed** will be displayed.

If it is a follow channel type and the state is closed, the state will be displayed in red; otherwise, it will be displayed in black.

Runtime:Day:Hour:Minute
This tells the Runtime value of the channel. Runtime represents the total length of time that this channel has been in a fault state.

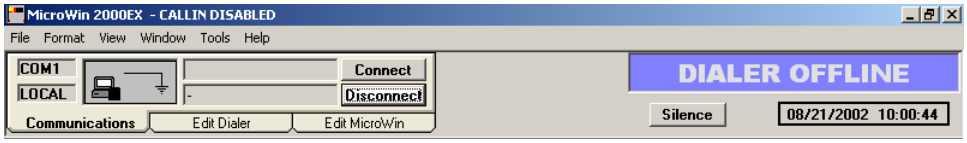
Counter
This tells the current Counter value of the channel. Counter counts the number of transitions from a normal state to a fault state.

Alarm Time: Day: Hour:Minute
This tells the current Time In Alarm value of the channel. Time In Alarm represents the current length of time that this channel has been in a fault state.

Latch
For a **Call On Alarm Input** channel, it tells if an alarm state is currently latched in or not. If so, '**Yes**' will be shown. For a **Digital Output** channel, it tells if the output is a latched or a momentary output. If it is a latched output channel, it will show '**Yes**'.
Reset Cnts: This resets the counter and the runtime back to zero**.**

Audible Alert

When a dialer is setup to call **MicroWin 2000EX** to announce an alarm condition, a horn is heard along with the appropriate flashing channel.



To silence the horn, press the Silence button.

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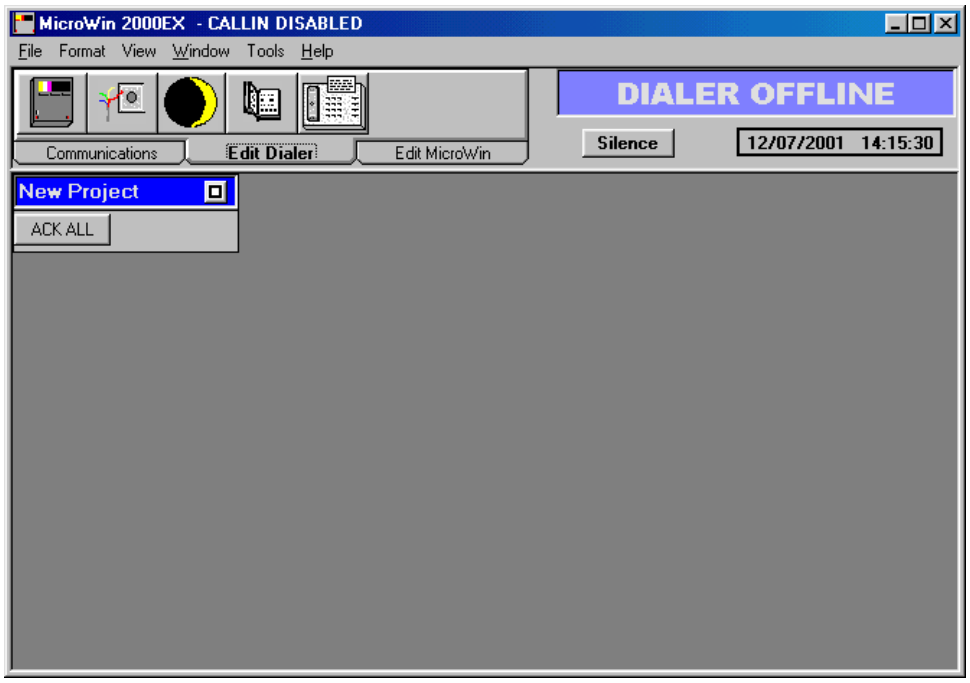
Editing a Dialer Configuration

This section will go over how to edit an **S1000EX** dialer configuration. It will show how to move around the dialer configuration forms and tell what this information means.

With **MicroWin 2000EX** running, a list of the projects that are currently in the system will be displayed.



Select the project by clicking in the blue background of the project's title bar. In this example, **New Project** will be configured. Select the **Edit Dialer** tab.

Edit Dialer Menu

The different sections of a configuration include the **System Setup**, **Calendar Setup**, **Telephone Setup**, **Point Setup**, and **Archiving Setup**.

System Setup: Setup system level information for an **S1000EX** such as Dialer Name, Phone Number, Ring Count, Access Code, etc.

Point Setup: Edit how the I/O Points are configured on the dialer. For example, change what numbers each point calls out to on alarm, the type of I/O Point, how the point status value is scaled inside **MicroWin 2000EX**, etc.

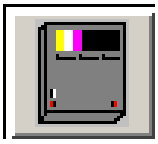
Calendar Setup: This is used to setup a dialer's callout information. A user can setup a dialer to automatically call a list of telephone numbers at specified times on specified days, and also limit call outs during specified times on specified days.

Archiving Setup: Setup how a dialer uses its memory to archive channel events. Each channel can be setup to archive on Status events or Time Based events. This sets up how the dialer's data logging features will function.

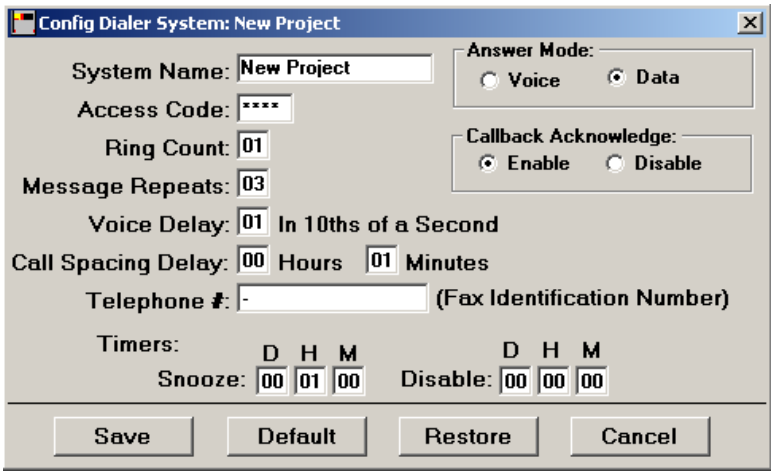
Telephone Setup: Edit the Phone Numbers that are on the dialer.

The following sections will describe each of the forms in detail. It will be a guide for how to use these forms to configure a dialer. The overall configuration of a dialer when using a **MicroWin 2000EX System** will be explained. However, this manual will **Not** be a replacement for the **S1000EX** Manual that comes with the dialer.

System Setup
On the **Edit Dialer** tab, click the **System Setup** button.



The **System Menu** will be displayed. In the title bar, the name of the currently edited entry will be displayed.



The following is a list of the settings that will be configured using this form. Each gives a description of what the field is used for.

System Name
This is a 16 character descriptor for the configured dialer. This label will be displayed on Fax Reports, Print Out Reports, and can be viewed after connected to the dialer in **MicroWin 2000 EX**.

Access Code
This is a 4-digit access code that allows access to the programming features after a call to or from the dialer has occurred. **MicroWin 2000EX** also needs this access code when performing certain commands, such as configuring the dialer, changing an channel's output value, etc. The default is **1234**. To disable this code, set it to **0000**.

Ring Count
Before the dialer answers an incoming call, the dialer will wait this number of rings. This should be kept to a minimum if there will be no users answering the phone at the dialer sight.

Message Repeats
When a call to or from the dialer has occurred and the dialer is currently talking in voice mode, the dialer will speak the full alarm message this number of times.

Voice Delay

In 10ths of a second, this is the delay time that will occur from the time a dialer command is typed in with a touch-tone phone to the voice response that will follow. It is also used to put pauses in some of the longer voice messages.

Intercall Delay (Hour : Minutes)
This is the time that the dialer will wait between each successful callout. If a dialer makes a call out to some number and hears that someone has answered the phone, an intercall delay will come into affect after this call is finished. From the time the dialer hangs up on the call out, a timer will start. Until this timer reaches the Intercall delay, the dialer will not allow any other call outs to be made. This is to allow time for a user to make a call in to the unit even during alarm call outs.

Telephone Number
This is a number that is required by the **FCC** if the dialer is to be used as a FAX Machine. It will be put on the top of every fax that is made. Don't setup multiple dialers with the same telephone number.

> **Important**: **MicroWin 2000EX** uses this number as the dialer's identifier. This number will need to be configured on the dialer before dialer call ins will be accepted to a **MicroWin 2000EX** System. Once this number has been changed on the dialer, disconnect and manually reconnect using **MicroWin 2000EX** so that **MicroWin 2000EX**'s database will be properly setup to answer a call in from this dialer.

Answer Mode
The dialer can be setup to answer the phone one of two ways: in **Voice Mode** or in **Data Mode**. If **MicroWin 20000EX** is going to call the unit, it will need to be configured as **Data Mode**. If the dialer is done being configured with **MicroWin 200**0EX and it will only be called by people, it can be setup as **Voice Mode**.

> **Important**: When **MicroWin 2000EX** is calling a dialer, it will need the dialer to be in **Data Answer Mode**. When a dialer is in **Data Answer Mode**, a user can still call the dialer. The dialer will answer with a modem carrier tone for about 10 seconds and revert to voice if it didn't connect with another modem. It is recommended to keep all dialers in **Data Answer Mode** since this does **Not** affect how the dialer calls out dialer alarms.

Callback Acknowledge
Whenever a dialer has an alarm condition, it will try and report this alarm by making call outs. If this alarm condition hasn't been acknowledged, it will pause for the **Intercall Delay**(see above) and then try calling out on the next number in the call out list. If a call in occurs during this Intercall Delay, it will acknowledge and report that it acknowledged the alarms that were causing the call outs. This feature can be **Enabled** or **Disabled**.

Snooze Delay (Days : Hours : Minutes)
Whenever a channel alarm becomes acknowledged, it will go into a snooze delay period. This is the amount of time this channel will be quiet (not make call outs) about its alarm condition before it tries to notify others of this alarm condition again. This time interval is to tell the dialer to be quiet for some period of time and then start with the reminder calls if the problem condition is not solved soon enough.

Disable Timer (Days : Hours : Minutes)
Having this programmed will cause all dialer calls to be disabled for this set amount of time. On the dialer, it is just a countdown timer that when it reaches zero, call outs will be re-enabled.

Save / Default / Restore / Cancel
At the bottom of the form, there are the standard **Save/Default/Restore/Cancel** buttons.

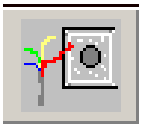
Save will save the edits that were made and close the form.

Default will reset all the settings back to the system defaults. A dialog will ask if this is the desired action.

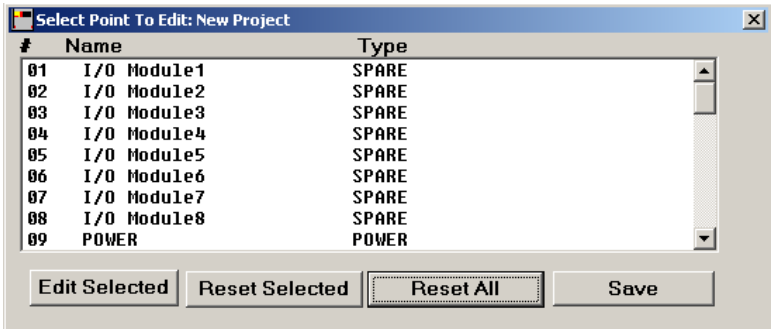
Whenever this form is opened, all the current settings are remembered in a temperary buffer. **Restore** will reset all the settings back to these remembered settings when the form was opened.

Cancel will cancel all the edits that have currently been made on this form. A dialog will ask if this is the desired action.

Point Setup
On the **Edit Dialer** tab,, click the **Point Setup** button.



The **Point Menu** will be displayed. In the title bar, the name of the currently edited entry will be displayed.



This form is used to see an overview of point configuration that has currently been programmed.

Each point has a **Point Name** descriptor and a **Type** that tells how the channel is setup.

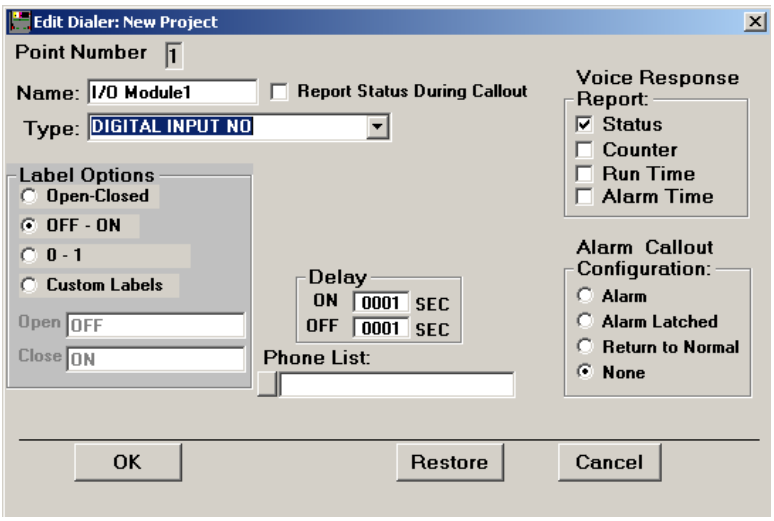
Edit Selected
To edit a point, select one of the points in the list box and then click on the **Edit Selected** button. This will show the **Point Edit** form (below). Double-clicking a point in the list box will do the same thing.

Reset Selected
To reset a particular point to its default, select the desired point and click **Reset Selected**. A dialog will ask if this is the desired action. If it is, then the selected point will reset to its default.

Reset All
To reset all the points back to their defaults, click the **Reset All** button. A dialog will ask if this is the desired action. If it is, then all the points will be reset to their defaults.

Close
Clicking on **Close** will move back to the **Edit Entry Configuration** form.

Editing an I/O Point
The **Point Edit** form will be displayed when a point has been selected to be edited.



This form is used to edit this point's settings.

Point Number #
Tells what I/O Point is currently being edited.

Name
This is a 16 character descriptor for this I/O Point. This is simply a label to help describe what the point is monitoring. It will be displayed on dialer Fax reports, Print reports, and on **MicroWin 2000EX** Realtime Data forms and reports.

Type
This tells the dialer how to treat this I/O Channel. Each dialer channel can be programmed to operate independent of the others. Changing the **Type** of a dialer channel is **dependent** on the hardware module that is currently installed in this dialer channel.

Based on the current type of module being programmed, only applicable values will be editable on the form. **For example**, if the current type of module is an **Input Type**, the setting for changing the **Current Output State** will not be shown. Also, if the current type of module is a **Digital Type** (**Opened/Closed**), the settings for **Analog Channel Types** (**Some Variable Level**) won't be shown, and vise versa.

Spare Channel Type
This channel input is ignored by the dialer. All channels that are currently being unused should be programmed as **Spare**.

Input Types
Input Types are used for monitoring current situations out in the field. They can be used in different ways. One way is to only report the current condition in the field and **not** call out on an abnormal/fault condition (**Alarm Configuration = Status**). Another way is to use the channel is as an alarm reporting channel to cause alarm call outs when a fault condition occurs (**Alarm Configuration = Call On Alarm**). There is also a setting for these channels to call out when an alarm condition occurs and when it clears (**Alarm Configuration = Call/Return**).

Whenever an Input Type is programmed to **Call** on an alarm condition and such a condition occurs, this channel will try to report the alarm condition that has occurred to the phone numbers that are in its **Telephone List**. The numbers that are in this list will be called in order until this channel alarm becomes acknowledged.

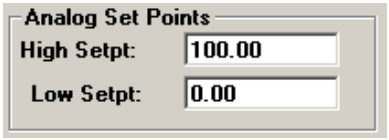
The following are the programmable channel **Input Types**:

Normally Open Digital Input
These channel inputs are reported as either **Open** or **Closed**. The normal condition is the **Open** condition and the fault condition is the **Closed** condition. For example, this can be used to monitor a Pump Failure Indicator, High/Low level switch, etc.

Normally Closed Digital Input
These channel inputs are reported as either **Open** or **Closed**. The normal condition is the **Closed** condition and the fault condition is the **Open** condition. For example, this can be used to monitor an intrusion alarm, system normal indicator, etc.

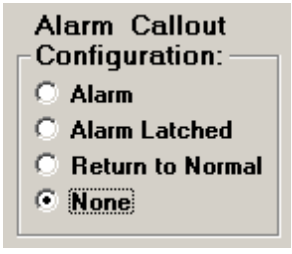
Analog Input
These channel inputs are reported as a level value. The normal condition is when the current level value is between the **High SetPoint** and **Low SetPoint**. The fault condition is when the level value is either above the **High SetPoint** or below the **Low SetPoint**. For example, this can be used to monitor a tank level, the current flow reading from a flow meter, etc.

To change the value of the Setpoint, click and type value.



Power Fail (Not Programmable)
This channel's input is reported as either **Open** or **Closed**. It is a normally **Closed** channel. It monitors the DC voltage input that it is receiving. When it drops too low, the dialer will resort to using the dialer battery if one is installed.

Alarm Configuration (Inputs Only)
Each input channel can be setup to handle channel values in a specific way. Each channel can be setup as either a **Status**, **Call On Alarm**, or **Call On Alarm and Return** channel.



A **None** channel indicates that this channel will **not** make any alarm call outs. It will recognize that a fault condition has occurred, but no alarm condition will be reported for this channel.

A **Alarm** channel will cause alarm call outs when an alarm conditions occurs. If the alarm condition clears without being acknowledged, the dialer channel will now indicate that its status is '**Now Normal**.'

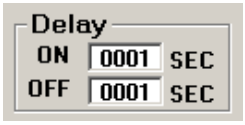
When a channel setup as Call On Alarm goes into alarm and gets acknowledged, i.e. someone learned of the alarm and commanded the dialer to stop making alarm call outs, the channel status will be '**Acknowledged**.' Once acknowledged, this channel will go into a snooze period where it will not call out for this alarm condition. When this snooze period expires, alarm call outs will recommence.

A **Return to Normal** (**Call/Return**) channel has the same properties of the above **Call On Alarm** in addition that a new set of call outs will be generated when the alarm condition clears. Basically, call outs are started whenever the channel alarm condition changes.

Channel's On Delay/Off Delay (Inputs Only)

When a channel's input state changes from a normal state to a fault state, the dialer will allow for a user defined **On Delay** time period of how long the input must be in this new fault state before registering this as an alarm condition.

When a channel's input state changes from a fault state to a normal state, the dialer will allow for a user defined **Off Delay** time period of how long the input must be in the normal state before registering that this alarm condition has cleared.



Alarm Latched

When a **Call On Alarm** input channel is **Latched**, any alarm condition that occurs will be latched in. Then , even if the physical alarm condition clears, the channel will still report an alarm condition. The alarm condition will only unlatch when the channel alarm gets acknowledged.

Output Types

Output Types are used for setting state values in the field. There are Output Types which allow only a user to change the values and there are Output Types that are changed by the dialer itself depending on specific conditions.

Since they are not used for monitoring an external condition, they will **not** make alarm call outs. The following are the user controlled channel **Output Types**:

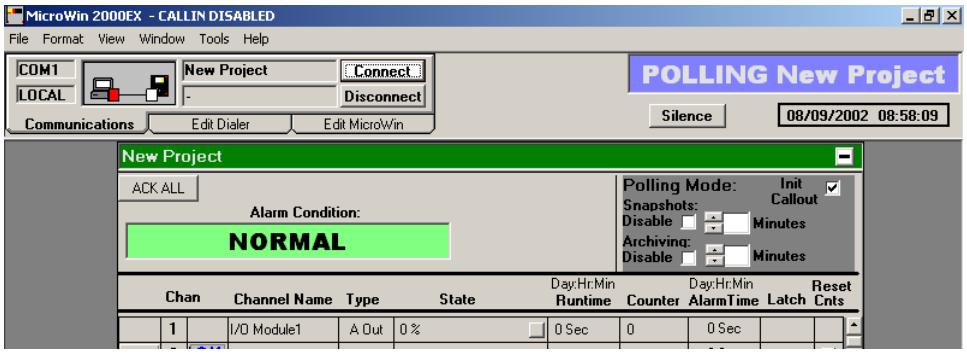
User Controlled Output Types

Digital Output

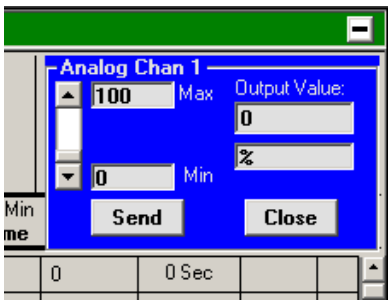
They can be setup for a user to call in and manually turn on/off a pump, or turn on/off a local alarm siren, etc.

When a **Digital Output** channel is **Latched**, anytime a user changes its state, it will remain in that state. If the channel is **Momentary**, it will close for the desired number of seconds that can be changed below and then reopen.

Analog Output
To set the output state of the **Analog Output Channel** you must be connected. Select the button in the State column for the desired channel.



The following form will be displayed. To change the **Output Value**, either drag the scroll bar until the desired value is displayed in the **Output Value** field or simply type in the value right in the **Output Value** field.

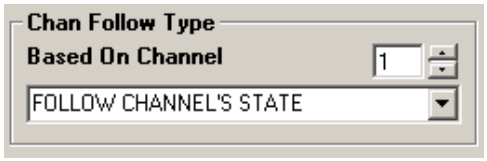


Dialer Controlled Channel Output Types

Digital Output – Local Alarm
While any unacknowledged dialer alarm is present on the dialer, this output will close. When all alarms have been acknowledged or cleared, this output will reopen. This can be used as a Local Alarm siren/light, trouble indicator, etc.

This channel's output will close whenever the dialer's **Power/Fault Light** is flashing 50/50.

Digital Output - Follow Channel
When a channel is set to follow another channel, its output state depends on the channel that it is following. Since the **Follow Channels** are controlled by the dialer, remember that a user isn't able to control these channels' output values. For example, for a user to have a manual override, this will need to be added at the sight. Use two other digital output channels: one will be the **manual/automatic switch** and the other will be to control the **manual override state**.



The following describes the **five** types of Follow Channels:

1) Follow Channel's State
Whenever the followed channel's state changes, opens or closes, this output will do the same, open or close, respectively. If the followed channel is an analog channel, this output will be closed only while the analog is in a fault condition (**above high setpt or below low setpt**).

2) Follow Channel's Fault Condition
Whenever the followed channel's state changes to its fault condition, this output will close. When the followed channel's fault condition clears, this output will reopen. If the followed channel is an analog channel, this output will be closed only while the analog is in a fault condition (**above high setpt or below low setpt**).

This is very close to the above setting of **Following Channel's State**. The only difference comes in when the channel it is following is a Normally Closed channel type: **Digital Input Normally Closed** and **Power Fail**. There is a difference since the channel's Fault State is when the input is Open.

3) Follow Channel's Alarm Condition
Whenever the followed channel goes into an alarm condition, this output will close. When the followed channel's alarm condition clears, this output will reopen.

The followed channel should **not** have its **Alarm Configuration** set to be a **Status** channel, since an alarm condition will never occur. In this case, this output will always be **Open**.

4) Follow Channel's Fill Algorithm
Following a **Fill Algorithm**, this output will **Close** when the followed analog state goes below its low set point. The output will then **Open** when the followed analog state goes above its high set point.

5) Follow Channel's Empty Algorithm
Following an **Empty Algorithm**, this output will **Close** when the followed analog state goes above its high set point. The output will then **Open** when the followed analog state goes below its low set point.

Channel Labeling Options
MicroWin 2000EX can read and display a channel's current state. How this data is shown can be setup on this form. With **Digital Channel Types**, any labels (15 characters or less) can be used for the **Open** and **Closed** conditions of the channel. With **Analog Channel Types**, the 0% to 100% value that is usually reported can be scaled to some other range values, for example, **20 ft** to **200 ft**.

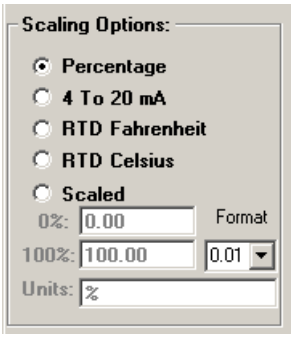
Labeling Options for Digital Channel Types

For all **Digital Channel Types**, the administrator has the ability to set how a channel's state will appear when reading an open or closed signal for a channel while using **MicroWin 2000EX**.

There are four labeling options: **Open-Closed**, **OFF-ON**, **0-1**, and **Custom Labels**. The first 3 (**Open-Closed**, **OFF-ON**, **0-1**) are predefined ways of labeling the **Open** and **Closed** states for a channel. The left string represents the open value and the right string represents the closed value. So in the case of **OFF-ON**, **OFF** will be used to represent an open value and **ON** will be used to represent a closed value.

These labels can also be changed to custom values using the **Custom Labels** selection. These custom **open** and **closed** labels are case sensitive and can be up to 15 characters each.

Scaling Options For Analog Channel Types



For all **Analog Types**, the administrator has the ability to set how a channel's state will appear when reading an analog value for a channel while using **MicroWin 2000EX**.

There are five scaling options: **Percentage**, **4 to 20mA**, **RTD Fahrenheit**, **RTD Celsius**, and **Scaled**. The first four (**Percentage**, **4 to 20mA**, **RTD Fahrenheit**, **RTD Celsius**) are predefined ways to scale the channel value.

Percentage is used to report how the channel value is actually being read on the dialer. Since percentage (**0% to 100%**) is the way that the dialer stores its analog channel values, no conversion of the data will take place before being displayed.

4 to 20mA is a simple conversion of the dialer's **0% - 100%** range to **4 - 20mA** range. For example, **0% = 4mA**, **25% = 8mA**, **50% = 12mA**, **75% = 16mA**, and **100% = 20mA**. This is a linear transformation from the **0% - 100% scale** to **4 - 20mA scale**.

RTD Fahrenheit and **RTD Celsius** are a little different. These two types are used with a special RTD Input module (connects to a 100 ohm platinum probe) that is available for the dialer. It can

be used to monitor oil temperatures, barring temperatures, etc. The temperature range is **-50° F** to **350° F**. For more information, contact **Microtel**.

The readings from an RTD Input are not linear. These two types have been supplied to provide an easy way to get an accurate scale transformation since they are not linear.

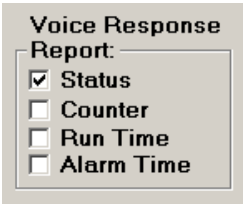
Scaled is used when something other than the predefined options is needed. For example, the **0%** to **100%** reading that is read for a dialer channel can easily be scaled to **0** to **200 Ft**, **30** to **90RPMs**, **-60 Centimeters** to **30 Centimeters**, or whatever the high and low values are for the current application.

This **Scaled** value is a simple linear conversion of the dialer's **0% - 100%** range to user defined scale. For example, if the scaled range is from **200 Fathoms** (**0%**) to **240 Fathoms** (**100%**), some sample transformations from the actual value to the scaled value are **0% = 200 Fathoms**, **25% = 210 Fathoms**, **50% = 220 Fathoms**, **75% = 230 Fathoms**, and **100% = 240 Fathoms**.

Report Status Flag During Callout
When a dialer is called or makes a callout to report an alarm, an initial status message is spoken to report the current status conditions on the dialer (which channels are in alarm, acknowledged, and now normal). When the **Report Status Flag** is set for a channel, the initial status message that is reported will now contain a message that specifies this channel's actual state value.

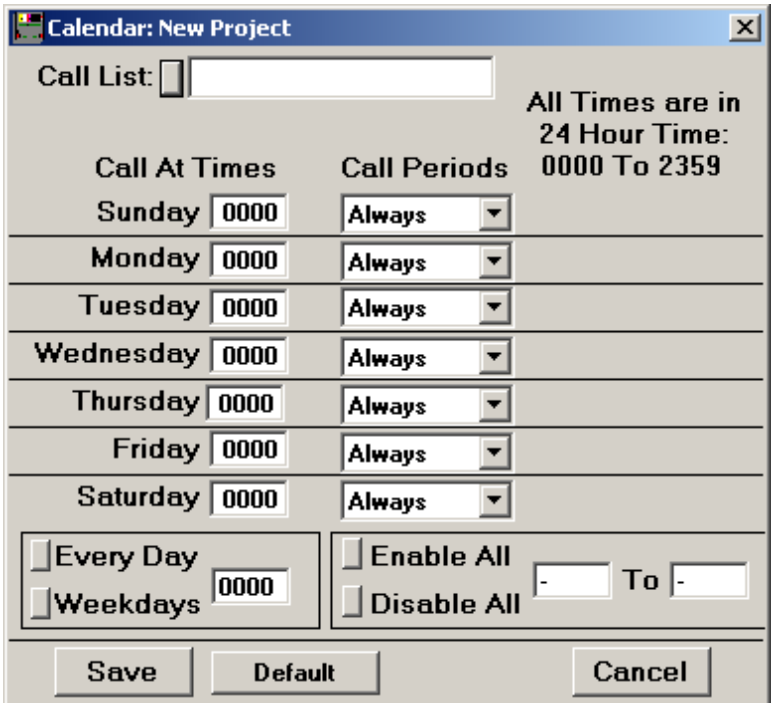
This is useful for quickly getting a particular channel's reading without having to type in any extra command codes.

Report Settings
When a channel reports its status condition to a person using a phone, each marked value will be spoken for this channel.



Calendar Setup
On the **Edit Dialer** tab, click the **Calendar Setup** button.

The **Calendar Menu** will be displayed. In the title bar, the name of the currently edited entry will be displayed.



The following is a list of the settings that can be configured using this form. Each gives a description of what the field is used for.

Calendar Name
This is a 50 character descriptor for the Calendar configuration. This is simply a label to help describe how the calendar information is programmed.

Call List
When a **Call At Time** occurs (See below), this set of telephone numbers will start being called out to. For more information about Phone Numbers and editing the call out list, see the sections **Editing Telephone Numbers** and **Editing an I/O Point/Telephone List** below.

Call At Times
The dialer can be programmed to make call outs at a particular time on a particular day of the week. Each day can be set to a different time. This time is setup as HHMM, where HH=Hours and MM=Minutes. It is in military time. For example, 0800 is 8 A.M. and 1430 is 2:30 P.M.

There is an easy way to set **Every Day** or just **Weekdays** to a particular call at time. Simply enter the time in the box shown below and click on the button next to the **Every Day** label or **Weekdays** label. This will update the days appropriately.

Call Periods
A dialer's call outs can be limited to certain times of the day. For a particular day, it can be **Enabled** or **Disabled** between the programmed time frame. Also, it can be set to always enabled (**Always**) or disabled (**Never**) for call outs during a day.

There is an easy way to set every days **Enable** or **Disable** time frame. Simply enter the desired time frame in the boxes shown below and click on the button next to the **Enable All** label or **Disable All** label. This will update the days appropriately.

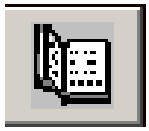
Save / Default / Cancel
At the bottom of the form, there are the standard **Save/Default/Restore/Cancel** buttons.

Save will save the edits that were made and move back to the **Edit Entry Configuration** form.

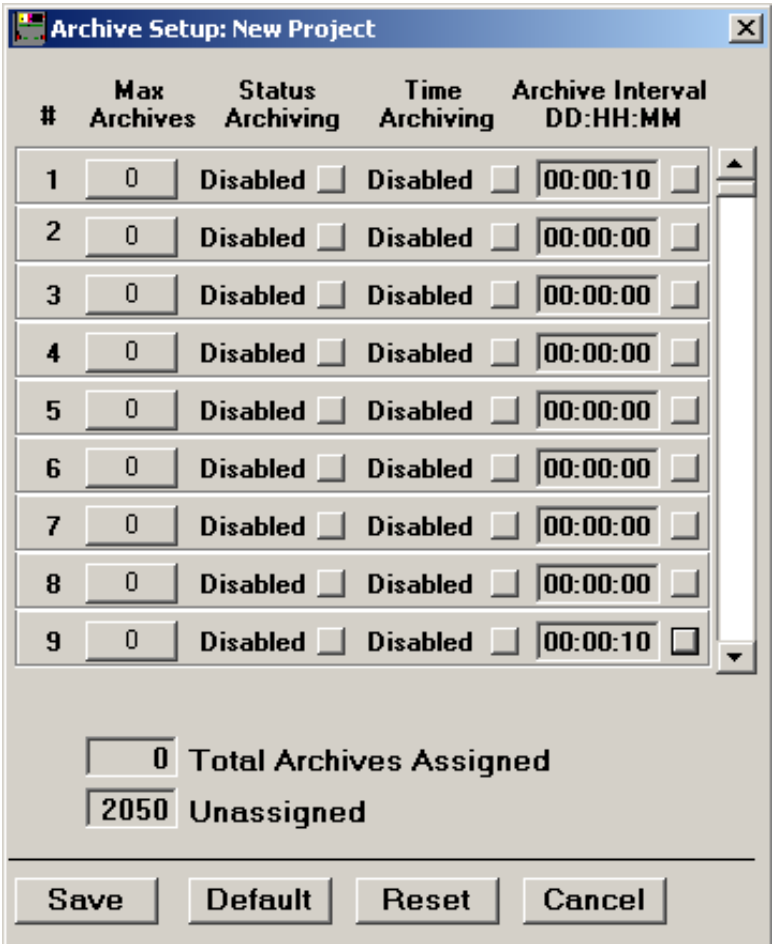
Default will reset all the settings back to the system defaults. A dialog will ask if this is the desired action.

Cancel will cancel all the edits that have currently been made on this form. A dialog will ask if this is the desired action.

Archiving Setup
On the **Edit Dialer** tab, click the **Archiving Setup** button.



This will display the **Archive Menu**.


Archive Setup: New Project
Max Archives Status Archiving Time Archiving Archive Interval DD:HH:MM
1 0 Disabled Disabled 00:00:10
2 0 Disabled Disabled 00:00:00
3 0 Disabled Disabled 00:00:00
4 0 Disabled Disabled 00:00:00
5 0 Disabled Disabled 00:00:00
6 0 Disabled Disabled 00:00:00
7 0 Disabled Disabled 00:00:00
8 0 Disabled Disabled 00:00:00
9 0 Disabled Disabled 00:00:10
0 Total Archives Assigned
2050 Unassigned
Save
Default
Reset
Cancel

This form allows all information about a dialer's archiving to be configured. The following is a full description of archiving.

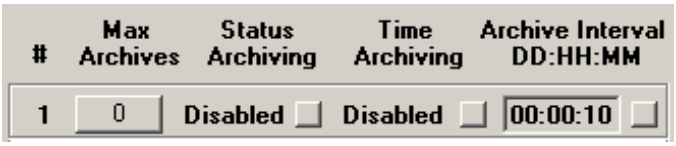
What is Archiving?
Archiving is the ability to collect specific events as they occur. This data can later be used to keep past records of alarm conditions, flow readings, tank levels, or anything that can be monitored.

While the dialer is monitoring events in the field, archiving can be used to take out the guess work of what is actually happening, even when there isn't anyone at the sight monitoring how the system is actually working. A past history of events will be recorded by the dialer and can later

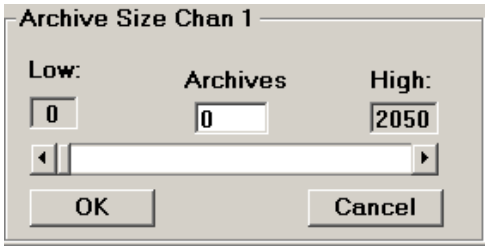
be transferred to **MicroWin 2000EX**. Once in **MicroWin 2000EX**, the data can be reviewed, printed, etc.

What is an Archive?
An archive is a recorded event that has previously occurred. Each archive is time stamped and stored along with pertinent information to tell what caused the event. All channel events contain the channel's current status to show what the current monitored condition was when the archive event took place.

The following picture shows the current settings of how a particular channel will archive its data.



Max Archives
This is the total number of archives that this channel has been setup to archive. This number will be between **0** to **2050**. The total number of stored archiving records on the dialer is **2050**. These records can be divided in any way among the 41 channels on the dialer. To change the number of archives, just click on the button for the desired channel.



Then, either type in the number of archives that will be used for this channel or drag the scroll bar to the desired amount. The **High** amount will be the number of archive records that are left to be distributed to this channel. Once done, click **OK** to approve the change or click **Cancel** to cancel the change.

At the bottom of the **Max Archives** column, there is a current count of the **Total Archives Assigned** and **Unassigned**. The Max total number of archives is **2050**.

Types of Archiving
There are two types of archiving: **Status** and **Time Based** Archiving. The **Enabling**/**Disabling** of each type will give the user a different set of archives.

Status Archiving
When **Enabled**, each time a channel status event occurs, a time stamped archive event will be recorded into the dialer's memory. These events include a **state change** (**open** to **closed**), an **alarm status change** (from **out of alarm** to **into alarm**), and an **acknowledgement of an alarm**.

This is a useful type of archiving when all the operator is concerned with is finding out when certain events occur. **For example**, finding out when and how long a pump motor has run, or determining when and how often a tank is being filled/emptied.

Time Archiving
When **Enabled**, a channel's status events will be recorded at some time interval (See **Archive Interval** below). Two types of events will be recorded: **First Time Archive** and subsequent **Time Archives**. The First Time Event shows when the channel first started recording the information for the channel using Time Archiving. Each subsequent Time Event tells when the next Time Based Archive was taken.

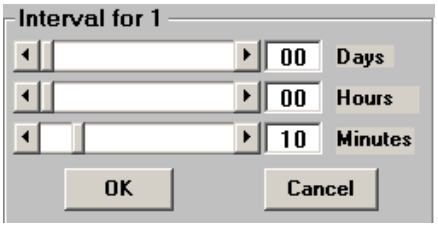
This is useful when monitoring a tank level, temperature, flow rate, or anything that is measured with a 4-20mA signal, 0-5v AC signal, etc. **For example**, recording a tank level every 5 to 15 minutes and determining how fast it fills/empties.

Archive Interval: Days:Hours:Minutes
Used as the time frame for **Time Archiving**. This interval is the rate at which the Time Archiving will take place. When Time Archiving is first setup, this time interval will be used to determine when the **First Time Archive** will take place. The dialer will try and make each archive based on the top of a minute. Also, if the time interval is some multiple of an hour, it will setup the archives to a time frame that will record archives using this association.

If the interval is **15 minutes** and the current time is **9:35**, it will record its first Archive at **9:45**, then **10:00**, **10:15**, **10:30**, etc. If the interval is **30 minutes** and the current time is **9:35**, it will record its first Archive at **10:00**, then **10:30**, **11:00**, **11:30**, etc.
If the interval is **6 minutes** and the current time is **9:35**, it will record its first Archive at **9:36**, then **9:42**, **9:48**, **9:54**, **10:00**, etc.

If the time interval is not a multiple of an hour, it will determine the best time to start recording and go from there.

To Edit the Archive Interval, click on the small button to the right of the desired channel's current **Interval for** (selected channel). Change the interval to the desired number of days, hours, and minutes.



Max Archives Changes
If the Max Archives for a channel goes up, this channel will be able to record more records than before. The records that are currently recorded will not be affected.

If the Max Archives goes down, this channel will only keep the newest archives to fill in the new channel archive size. The rest of the archives will be deleted.

Status or Time Archiving Changes Enable Status
If either changes the **Enable Status**, an archive will be recorded specifying what has changed.

If **Time Archiving** is now **Enabled** or **Time Interval** has changed, it will start again with another **First Time Archive**.

Saving the Changes to Archiving
After all the Archiving information is setup as desired, click on the file menu and click on the **Save Configuration** menu option. This will save the changes that have been made to the archiving setup and move back to the **Edit MicroWin Entry** form.

Save / Default / Restore / Cancel
At the bottom of the form, there are the standard **Save/Default/Restore/Cancel** buttons.

Save will save the edits that were made and close the form.

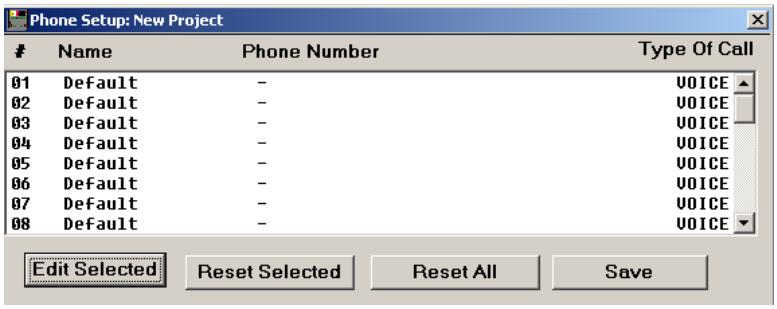
Default will reset all the settings back to the system defaults. A dialog will ask if this is the desired action.

Whenever this form is opened, all the current settings are remembered in a temperary buffer. **Restore** will reset all the settings back to these remembered settings when the form was opened.

Cancel will cancel all the edits that have currently been made on this form. A dialog will ask if this is the desired action.

Telephone Numbers
On the **Edit Dialer** tab, click the **Telephone Setup** button.

The **Phone Number Menu** will be displayed. In the title bar, the name of the currently edited entry will be displayed.



This form is used to see an overview of phone numbers that are currently entered into the system.

Each phone number has a **Name** descriptor, a **Phone Number** that is to be called, and the **Type of Call** which just tells how the call is setup.

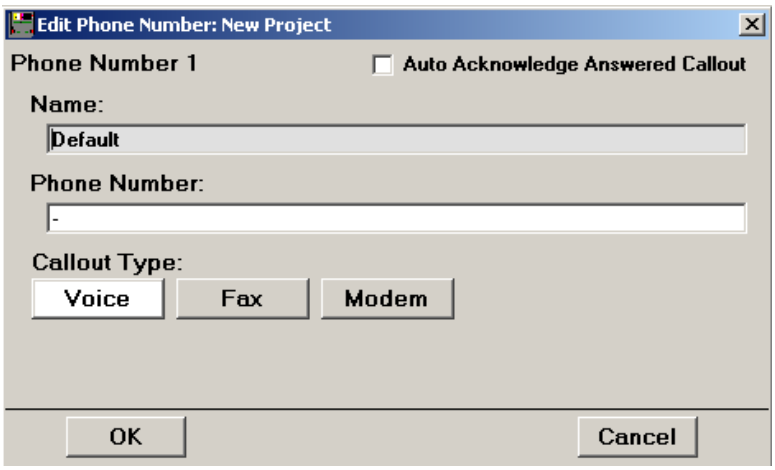
Edit Selected
To edit a phone number, select one of the numbers in the list box and then click on the **Edit Selected** button. This will show the **Phone Number Edit** form (below). Double-clicking a phone number in the list box will do the same thing.

Reset Selected
To reset a particular phone number to its default, select the desired phone number and click **Reset Selected**. A dialog will ask if this is the desired action. If it is, then the selected phone number will reset to its default.

Reset All
To reset all the phone numbers back to their defaults, click the **Reset All** button. A dialog will ask if this is the desired action. If it is, then all the phone numbers will be reset to their defaults.

Save
Clicking on **Save** will close the **Phone Setup** form..

Editing a Telephone Number
The **Edit Phone Number** form will be displayed when a phone number has been selected to be edited.



This form is used to edit the phone number settings.

Phone Number
Tells what telephone number is currently being edited.

Name
This is a 50 character descriptor for this telephone number. This is simply a label to help describe what the telephone number is going to call.

Phone Number
This is the phone number that will actually be dialed when a call out is made.

Callout Type (Voice/Fax/Modem)
This shows how the phone number is currently programmed. If the number is to call a fax machine, simple click on the **Fax** button and the telephone number string will change appropriately (i.e. puts a ***991** at the beginning of the phone string).

Auto Acknowledge Answered Callout
When a phone call is made to this phone number, the dialer will recognize if the call is answered. If this callout is answered and this Auto Acknowledge is marked, it will tell this phone number to acknowledge the channel alarms that caused this phone number to be called.

Disable
Having this programmed will cause all dialer calls to this telephone number disabled for this set amount of time. On the dialer, it is just a countdown timer that when it reaches zero, call outs for this phone number will be re-enabled.

OK / Cancel
At the bottom of the form, there are the standard **OK/Cancel** buttons.

OK will save the edits that were made and move back to the **Phone Setup** form.

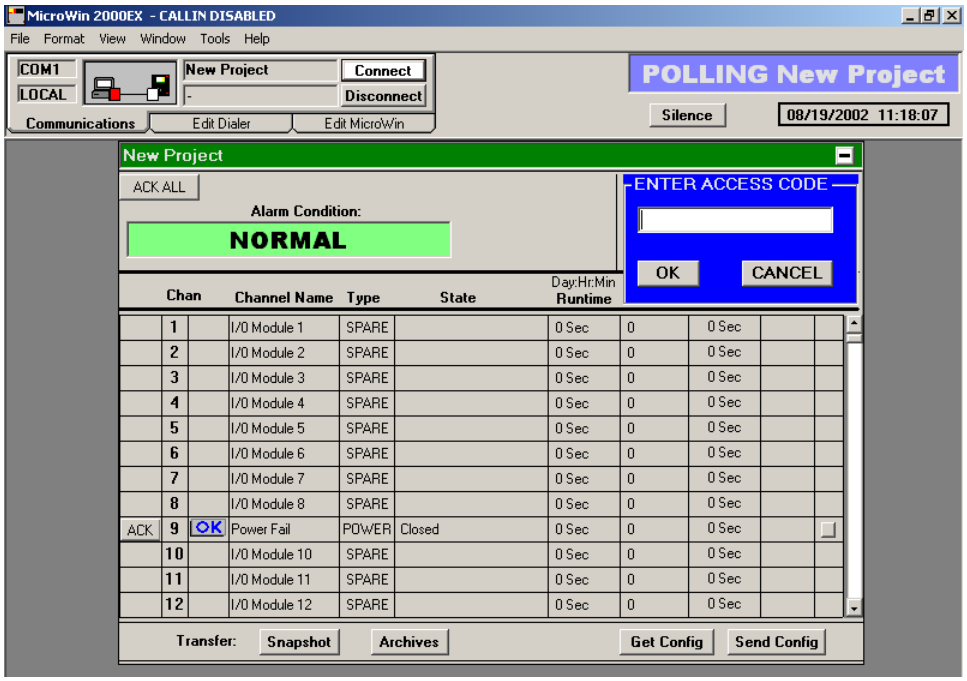
Send Config

After editing a new configuration or making changes to a old one these changes must be sent to the **S1000EX**. **MicroWin 2000EX** can send any and all settings that particular project has except the voice messages.

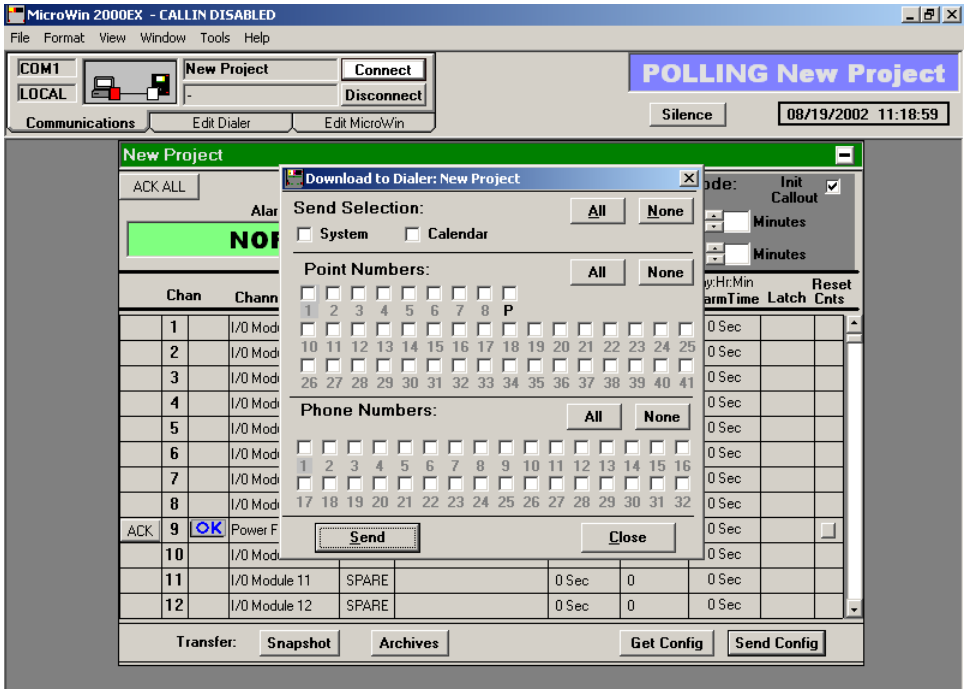
MicroWin 2000EX must be Polling (connected) to **Send Config**.

Select the **Send Config** button on the bottom right of the **Realtime Data Page**.

The following form will be shown.


MicroWin 2000EX - CALLIN DISABLED
File Format View Window Tools Help
COM1
LOCAL
New Project
Connect
Disconnect
Communications
Edit Dialer
Edit MicroWin
POLLING New Project
Silence
08/19/2002 11:18:07
New Project
ACK ALL
Alarm Condition:
NORMAL
ENTER ACCESS CODE
OK
CANCEL
Chan
Channel Name
Type
State
Day:Hr:Min Runtime
1 I/O Module 1 SPARE 0 Sec 0 0 Sec
2 I/O Module 2 SPARE 0 Sec 0 0 Sec
3 I/O Module 3 SPARE 0 Sec 0 0 Sec
4 I/O Module 4 SPARE 0 Sec 0 0 Sec
5 I/O Module 5 SPARE 0 Sec 0 0 Sec
6 I/O Module 6 SPARE 0 Sec 0 0 Sec
7 I/O Module 7 SPARE 0 Sec 0 0 Sec
8 I/O Module 8 SPARE 0 Sec 0 0 Sec
ACK 9 OK Power Fail POWER Closed 0 Sec 0 0 Sec
10 I/O Module 10 SPARE 0 Sec 0 0 Sec
11 I/O Module 11 SPARE 0 Sec 0 0 Sec
12 I/O Module 12 SPARE 0 Sec 0 0 Sec
Transfer:
Snapshot
Archives
Get Config
Send Config

Enter the **Access Code** and choose OK. The factory default access code is 1234.



Select the check boxes for the **Send Selection** choices, then select **Send**.

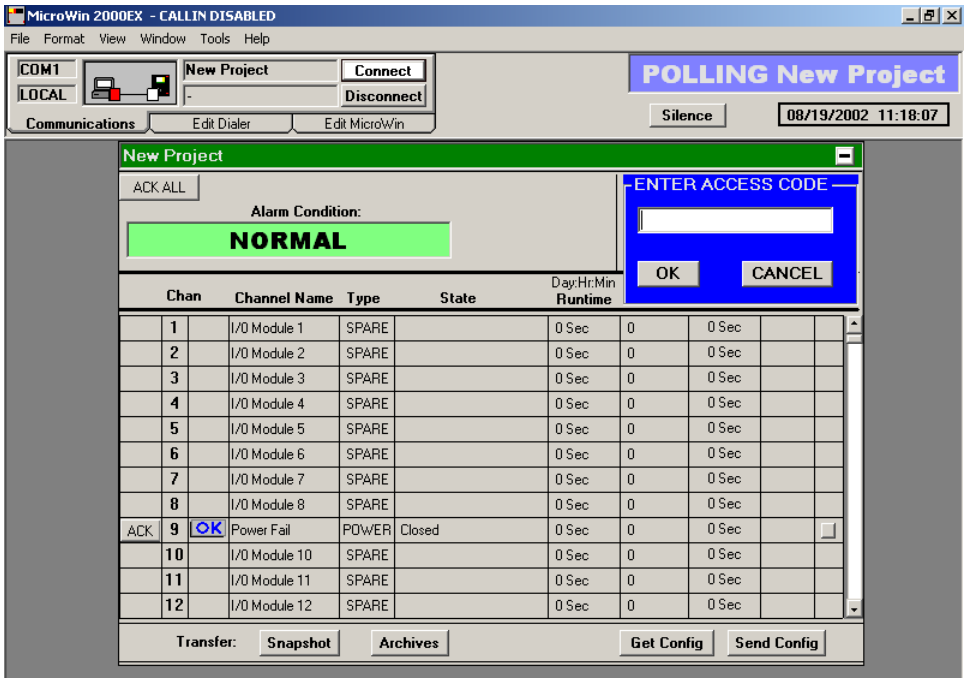
Get Config

MicroWin 2000EX can retrieve any and all settings that particular project has except the voice messages. If you have a **S1000EX** already configured you can **Upload** its configuration.

MicroWin 2000EX must be Polling (connected) to **Get Config**.

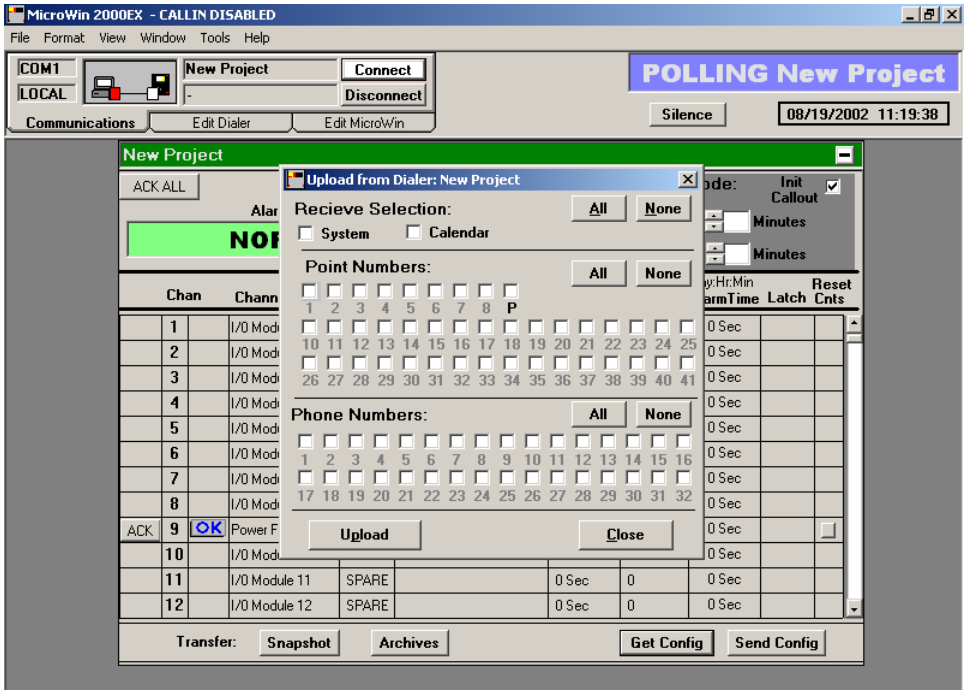
Select the **Get Config** button on the bottom right of the **Realtime Data Page**.

The following form will be shown.

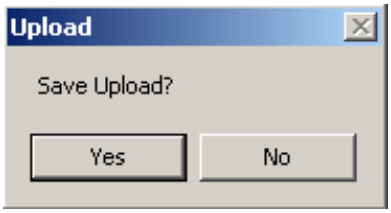

MicroWin 2000EX - CALLIN DISABLED
File Format View Window Tools Help
COM1
LOCAL
New Project
Connect
Disconnect
Communications
Edit Dialer
Edit MicroWin
POLLING New Project
Silence
08/19/2002 11:18:07
New Project
ACK ALL
Alarm Condition:
NORMAL
ENTER ACCESS CODE
OK
CANCEL
Chan
Channel Name
Type
State
Day:Hr:Min Runtime
1 I/O Module 1 SPARE 0 Sec 0 0 Sec
2 I/O Module 2 SPARE 0 Sec 0 0 Sec
3 I/O Module 3 SPARE 0 Sec 0 0 Sec
4 I/O Module 4 SPARE 0 Sec 0 0 Sec
5 I/O Module 5 SPARE 0 Sec 0 0 Sec
6 I/O Module 6 SPARE 0 Sec 0 0 Sec
7 I/O Module 7 SPARE 0 Sec 0 0 Sec
8 I/O Module 8 SPARE 0 Sec 0 0 Sec
ACK 9 OK Power Fail POWER Closed 0 Sec 0 0 Sec
10 I/O Module 10 SPARE 0 Sec 0 0 Sec
11 I/O Module 11 SPARE 0 Sec 0 0 Sec
12 I/O Module 12 SPARE 0 Sec 0 0 Sec
Transfer:
Snapshot
Archives
Get Config
Send Config

Enter the **Access Code** and choose OK. The factory default access code is 1234.

After the **Access Code** is accepted the **Upload from Dialer** form will be shown.



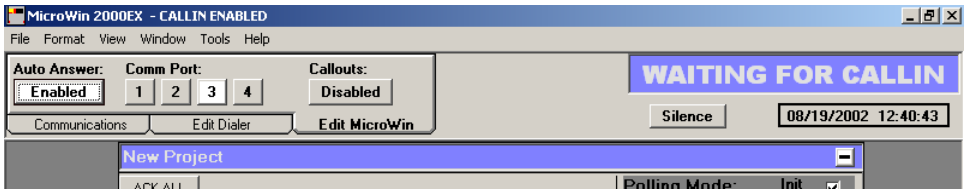
Select the check boxes for the **Receive Selection** choices, then select **Upload**. When completed, the **Upload** form will be shown. Select Yes or No.



Setup S1000EX to Call MicroWin 2000EX

If you want a particular dialer to call a **MicroWin 2000EX** to report some alarm condition, a special telephone escape sequence will need to be added to the telephone number. The escape sequence ***990** code should be placed at the beginning of the telephone number. It will be needed in order for the dialer to know that it is calling a **MicroWin 2000EX** System. If it is not added, it will try and talk in voice to your computer's modem, which will **Not** work. It is important to configure each dialer with a unique **Telephone (Fax Identification Number)** and **MicroWin 2000EX** must have made at least one call-out to that dialer and the dialer must have been sent the latest configuration.

Auto Answer on the **Edit MicroWin** tab must be **Enabled** for **MicroWin 2000EX** to accept a Callin.



Archives

What is Archiving?

Archiving is the ability to collect specific events as they occur. This data can later be used to keep past records of alarm conditions, flow readings, tank levels, or anything that can be monitored.

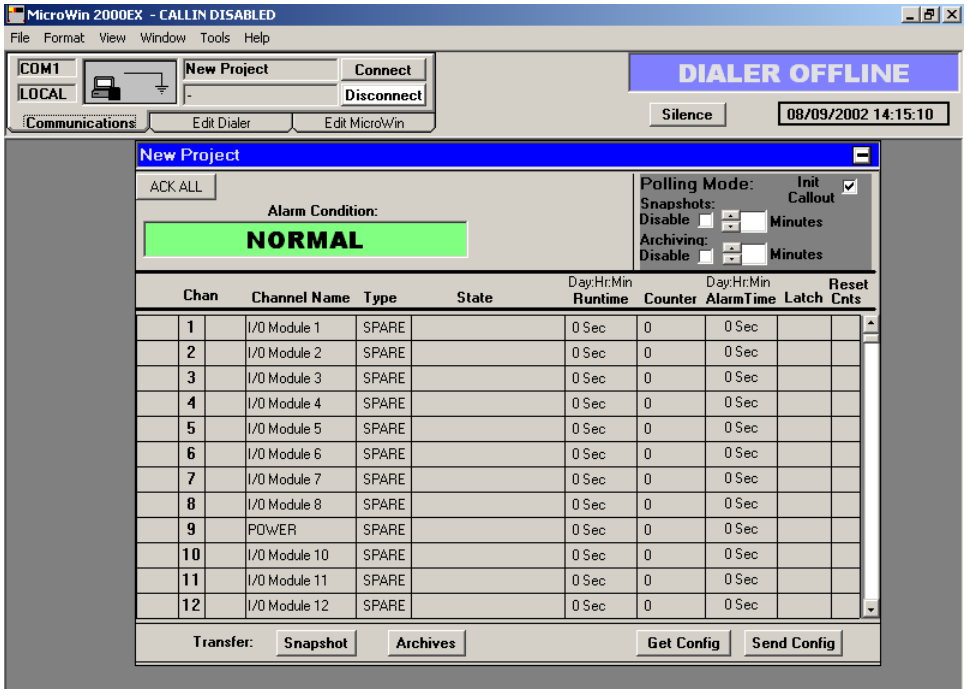
While the dialer is monitoring events in the field, archiving can be used to take out the guess work of what is actually happening, even when there isn't anyone at the sight monitoring how the system is actually working. A past history of events will be recorded by the dialer and can later be transferred to **MicroWin 2000EX**. Once in **MicroWin 2000EX**, the data can be reviewed, printed, etc.

What is an Archive?

An archive is a recorded event that has previously occurred. Each archive is time stamped and stored along with pertinent information to tell what caused the event. All channel events contain the channel's current status to show what the current monitored condition was when the archive event took place.

Transfer Archives

Select the project by clicking in the blue background of the project's title bar. To open the New Project, left click in the small square in the upper right corner of the New Project's title bar. Connect to the dialer either local or modem. When a project has been opened, the screen is referred to throughout this document as the **Realtime Data Page**.



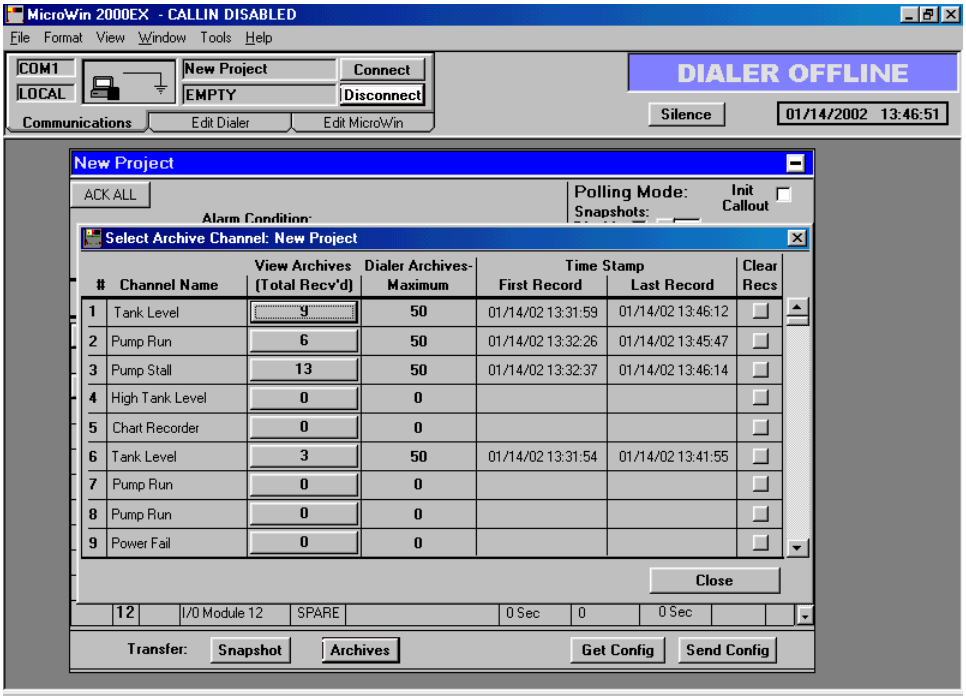
Connect to the dialer either local or modem. To receive archives from the dialer, click the **Archives** button on the **Realtime Data Page**.

The Status Window will show the transfer progress. Once the archives have been retrieved from a dialer, they are removed from the dialer's memory

To automatically collect Archives see **Polling Mode** page 55

View Transferred Archives

Now that the archives have been received from the dialer, the last step in this overview of collecting archives is to view these received archives. Select **View, Archive** menu option from the menu bar.

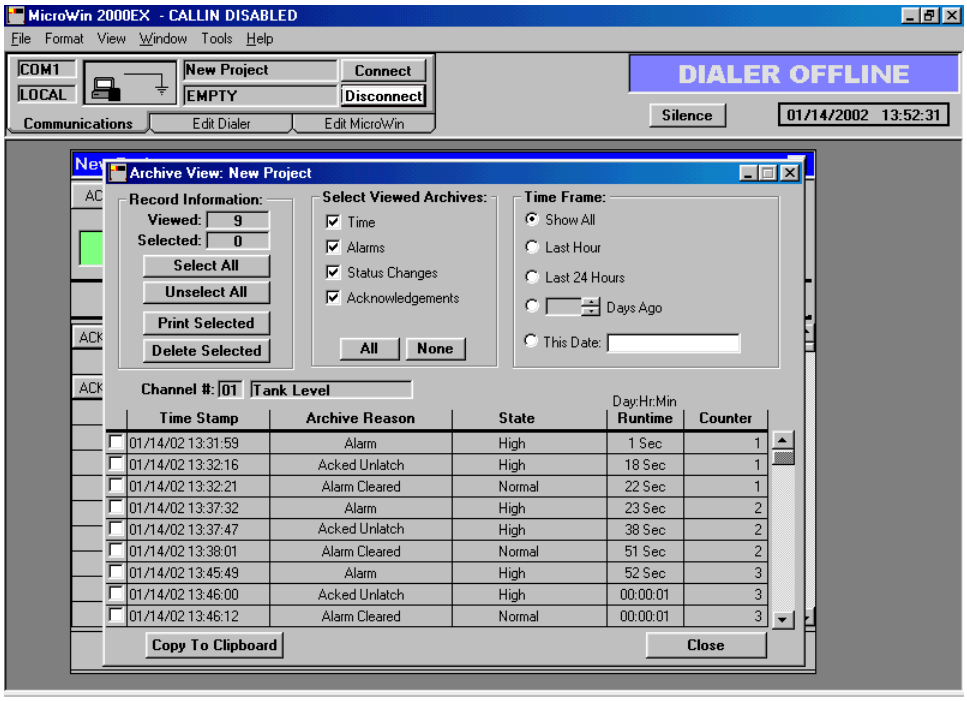

MicroWin 2000EX - CALLIN DISABLED
File Format View Window Tools Help
COM1
LOCAL
New Project
EMPTY
Connect
Disconnect
Communications
Edit Dialer
Edit MicroWin
DIALER OFFLINE
Silence
01/14/2002 13:46:51
New Project
ACK ALL
Polling Mode:
Snapshots:
Init Callout
Select Archive Channel: New Project
Channel Name | View Archives (Total Recv'd) | Dialer Archives-Maximum | Time Stamp First Record | Time Stamp Last Record | Clear Recs
1 Tank Level 9 50 01/14/02 13:31:59 01/14/02 13:46:12
2 Pump Run 6 50 01/14/02 13:32:26 01/14/02 13:45:47
3 Pump Stall 13 50 01/14/02 13:32:37 01/14/02 13:46:14
4 High Tank Level 0 0
5 Chart Recorder 0 0
6 Tank Level 3 50 01/14/02 13:31:54 01/14/02 13:41:55
7 Pump Run 0 0
8 Pump Run 0 0
9 Power Fail 0 0
Close
12 I/O Module 12 SPARE 0 Sec 0 0 Sec
Transfer: Snapshot Archives Get Config Send Config

The above example shows current archiving information about each channel. It shows that **channel 1**, named **Tank Level**, has been setup to record a total of **50 archives**. The channel has currently recorded **9** of these archives. When all 50 archives get recorded for this channel, any new records will overwrite this channels' oldest recorded archives, i.e. only the newest **50 archives** will be stored for this channel.

It should be noted that in the example above the channel 1 is configured to archive 50 records. As archives are retrieved the number in the (Total Recv'd) column will continue to count archives as they are received, and could far exceed 50.

Click on the **View Archives** button for the desired channel.

The **Archive View** form displays the archives for a particular channel.

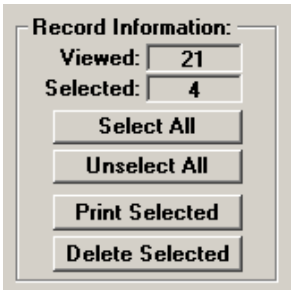


While on this menu, the user can easily view all the archives that have been recorded for a particular channel.

To scroll up and down the current list of archives, use the arrows on the right of the archive data.

Selected Archive Records
While viewing the channel archives, there are selected and unselected archives. A user marks those archives that are of interest. They can be selected/unselected individually or as a whole group. Selecting certain archives gives the user control over which archives to **Print** or **Delete**. A record that is selected will have a mark in the box to the left of the record. To select or unselect an individual record, click the box next to the desired record.

Channel Archive Record Information
This shows the current number of **Viewed** and **Selected** records. These numbers are dependent on the **Selected Viewed Archives**(below), **Selected Time Frame**(below), and the number of selected records in the viewed list. This section also gives the user some actions to perform.



Select/Unselect All
Selects or unselects all records that are currently viewed, respectively.

Print Selected Archives
Takes all records that are currently selected and prints up a tabular report on this information.

When **Print Selected** is clicked, the user will have the option to Print a **Normal** or a **Condensed** report. The **Normal** report will give more space between individual records, while the **Condensed** report will print many more records on a single page.

Delete Selected Archives
Takes all records that are currently selected and permanently removes them from the database.

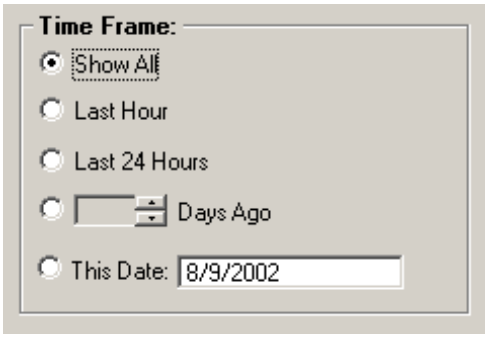
Selecting Viewed Archives
The user can choose to view particular events that have occurred on the dialer. Select one or more settings by clicking on the desired events. All those marked are the selected events. To select **All** or **None** of the events, click on the button labeled **All** or **None** button, respectively.

Selecting and unselecting event types will cause the screen to update with the desired set of archive records.

The **Selected Viewed Archives** work along with the **Selected Time Frame** (see below) to determine the current set viewed archives.

Time - These correspond to archives that were recorded automatically on some user defined time interval. These are only recorded when **Time Archiving** is Enabled.
Alarms - When an alarm change occurs on the channel, an archive will be logged recording when it took place and the alarm change that took place.
Status Changes - Whenever the channel's input state changes from normal to fault and vice versa, an archive will be recorded.
Acknowledgements - Whenever an alarm on this channel gets acknowledged, an archive will be recorded.

Selecting a Time Frame
Once a number of records have been downloaded to the database from the dialer, searching for information for a particular time can be quite daunting. This time frame feature lets this search be easily narrowed.



The **Selected Time Frame** works along with the **Selected Viewed Archives** (see above) to determine which archives are the current viewed archives. Select one of the following Time Frames.

Show All - Shows all archives for this channel.
Last Hour - Only show the archives that were recorded on the dialer within the last hour from the current computer time.
Last 24 Hours - Only show the archives that were recorded on the dialer within the last 24 hours from the current computer time.
This Date: X - Only show the archives that were recorded on the dialer with the date of **X**.

Select All, choosing this option allows the user to select all records for the particular channel being viewed.

Unselect All, this option allows the user to unselect selected records.

Print Selected, if connected to a local printer the selected records can be printed.

Delete Selected, this feature will delete all selected records.

Individual records may be selected by using the check box to the left of each record.

This data can be viewed at a later time by selecting view on the desktop and choosing Archive from the drop down box.

Copy to Clipboard, after selecting the records of choice, select the Copy to clipboard button,open Excel or Word and paste the records of choice.

Select All, choosing this option allows the user to select all records for the particular channel being viewed.

Unselect All, this option allows the user to unselect selected records.

Print Selected, if connected to a local printer the selected records can be printed.

Delete Selected, this feature will delete all selected records.

Copy to Clipboard, after selecting the records of choice, select the Copy to clipboard button,open Excel or Word and paste the records of choice.

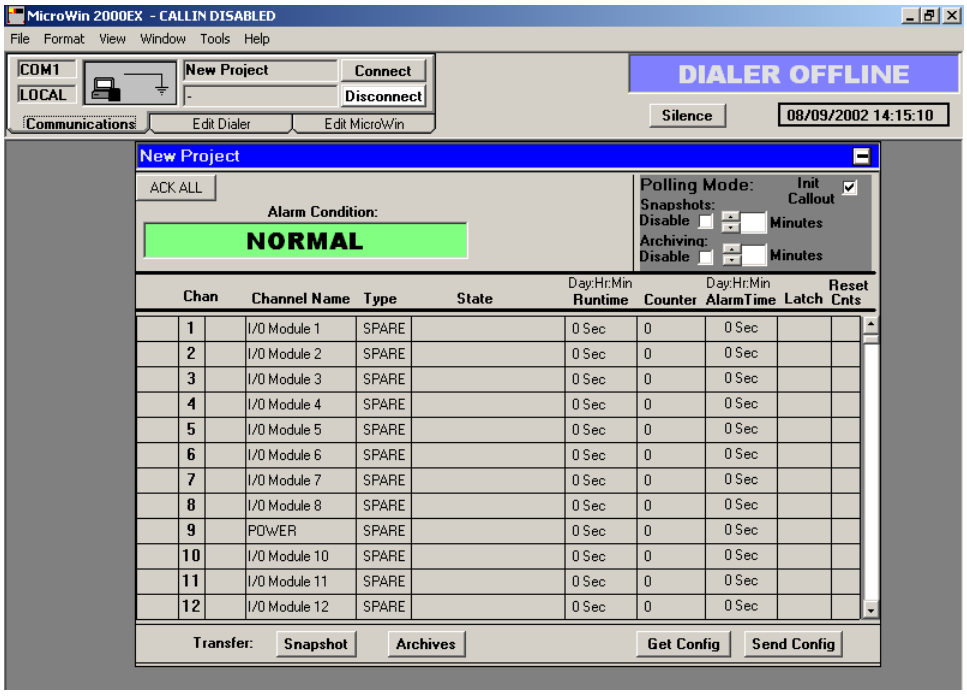
Individual records may be selected by using the check box to the left of each record.

This data can be viewed at a later time by selecting view on the desktop and choosing Archive from the drop down box.

Snapshots

What is an Snapshot?
While an entry and dialer are connected, a recorded snapshot can be taken. An entry can be setup to automatically call to its dialer and record a snapshot or a user can manually connect up and record some number of snapshots. Also, when a dialer alarm call-in occurs, it connects up and sends a snapshot and hangs up.

Transfer Snapshots
Select the project by clicking in the blue background of the project's title bar. To open the New Project, left click in the small square in the upper right corner of the New Project's title bar. Connect to the dialer either local or modem. When a project has been opened, the screen is referred to throughout this document as the **Realtime Data Form**.

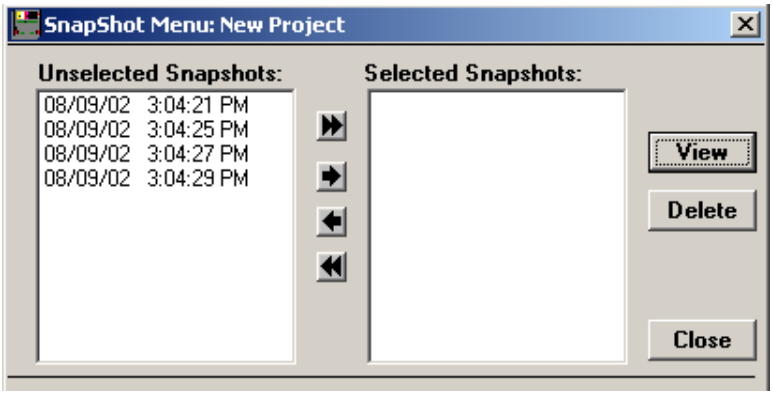


Connect to the dialer either local or modem. To take Snapshots of the dialer, click the **Snapshot** button on the **Realtime Data Form**.

To view the Snapshots select **View, Snapshot** menu option from the menu bar.

To automatically collect Snapshots see **Polling Mode** page 55

View Transferred Snapshots
Now that the snapshots have been taken from the dialer, they can be viewed. Select **View, Snapshot** menu option from the menu bar.



Snapshot Menu Actions
When a snapshot is taken, it is first put into the **Unselected Snapshots** list. This list contains those snapshot records that the user isn't planning to perform actions on. The following actions are done to move the records between these two lists.

Move all snapshots from the **Unselected Snapshots** list over to the **Selected Snapshots** list.

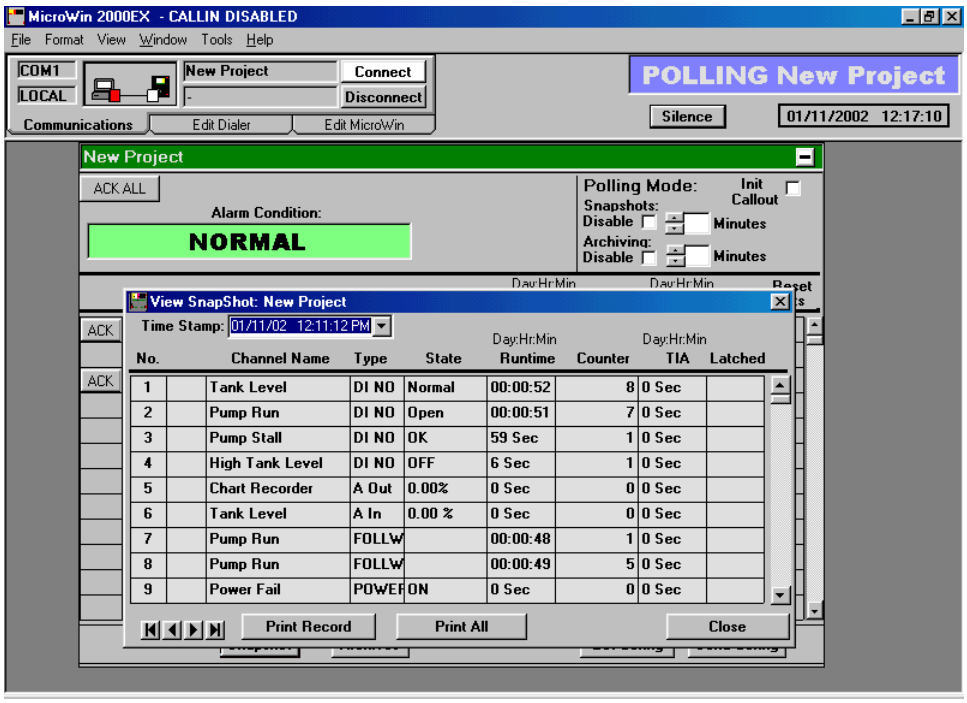
Move only the highlighted record in the **Unselected Snapshots** list over to the **Selected Snapshots** list. Another way to move over individual records is by double-clicking the desired records in the **Unselected Snapshots** list.

Move only the highlighted record in the **Selected Snapshots** list over to the **Unselected Snapshots** list. Another way to move over individual records is by double-clicking the desired records in the **Selected Snapshots** list.

Move all **Selected Snapshots** over to the **Unselected Snapshots** list.

View
This will let the user review the **Selected Snapshots**. Once clicked, the current form will be changed to the **Snapshot Data** form (see below). If a record in the **Selected Snapshots** list was highlighted, this will be the first record shown, otherwise, the first record in the list will be shown.

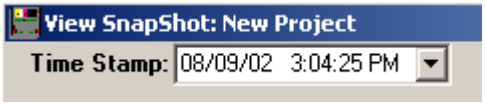
Delete
This will remove all **Selected Snapshots permanently** from the database. After this action is performed, the **Selected Snapshots** list will be empty.


MicroWin 2000EX - CALLIN DISABLED
File Format View Window Tools Help
COM1
LOCAL
New Project
Connect
Disconnect
Communications
Edit Dialer
Edit MicroWin
POLLING New Project
Silence
01/11/2002 12:17:10
New Project
ACK ALL
Alarm Condition:
NORMAL
Polling Mode:
Init Callout
Snapshots: Disable
Minutes
Archiving: Disable
Minutes
View SnapShot: New Project
Time Stamp: 01/11/02 12:11:12 PM
Day:Hr:Min
Day:Hr:Min
No. Channel Name Type State Runtime Counter TIA Latched
1 Tank Level DI NO Normal 00:00:52 8 0 Sec
2 Pump Run DI NO Open 00:00:51 7 0 Sec
3 Pump Stall DI NO OK 59 Sec 1 0 Sec
4 High Tank Level DI NO OFF 6 Sec 1 0 Sec
5 Chart Recorder A Out 0.00% 0 Sec 0 0 Sec
6 Tank Level A In 0.00 % 0 Sec 0 0 Sec
7 Pump Run FOLLW 00:00:48 1 0 Sec
8 Pump Run FOLLW 00:00:49 5 0 Sec
9 Power Fail POWER ON 0 Sec 0 0 Sec
Print Record
Print All
Close

This form allows the user to view the selected snapshot data. The snapshot viewed corresponds to the **Time Stamp** at the top of the form. This tells the user the current time that was on the dialer when the data was transmitted.

Snapshot Status Data
The status information displayed here corresponds to the data that was on the dialer at the time the information was transferred from the dialer.
See section **Appendix E: Dialer Channel Information, Page 95** for more details of the Realtime Data.

Selecting the Viewed Record
Selecting another record to view can be done by using the **Time Stamp** drop-down box at the top of the form. To change the current record, click on the Down Arrow and choose another record to view by clicking on this record.



Moving to different records can also be done by using the select position arrows. These buttons represent **First**, **Previous**, **Next**, and **Last**, respectively.

Print Recorded
This will send a copy of the selected snapshot records to the printer.

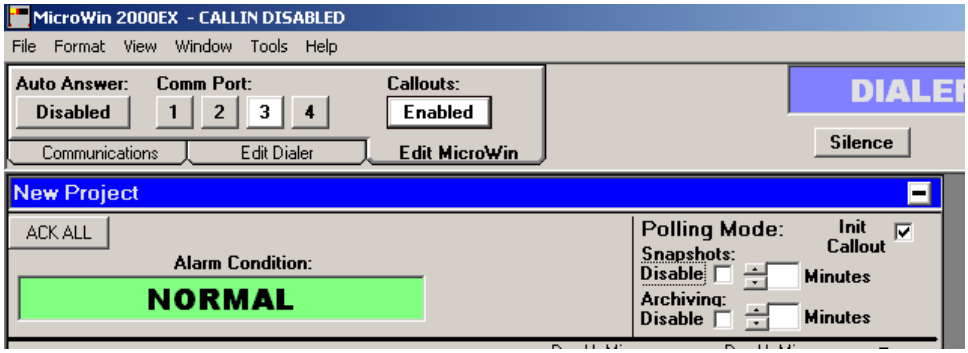
Print All
This will send a copy of all snapshot records to the printer.

Polling Mode

MicroWin 2000EX can be set to automatically call any dialer and collect Snapshots and Archives.

To use the **Polling Mode,** the **Callouts** button on the **Edit MicroWin** tab will need to be **Enabled**.

On the desk top enlarge the project of choice by clicking on the small box in the upper right corner of the selected project.



The Snapshots or Archive is Enabled by placing a check in the appropriate checkbox. The time interval of the call outs can be incremented by using the up and down arrows next to the minute's window. The interval is increased by 5minute increments up to 55 then changes to hours When both or either is disabled, the check box to the right of Disable is clear.

Do Init Callout

When **MicroWin 2000EX** is put into **Callouts Enabled** mode, all entries enabled to make automatic call-outs will start a countdown timer to call after this time interval has expired. If this **Initial Callout** check box is checked, this entry will begin to call out to retrieve data within 60 seconds while also counting down for the next time to callout.

Snapshots

This check box allows the user to enable or disable the Automatic Snapshots for an entry. When enabled MicroWin 2000EX will, at the appropriate time, call the dialer, and take a snapshot. After it is finished, if no other transfer actions are currently set MicroWin 2000EX will disconnect from the dialer.

Archives

This check box allows the user to enable or disable the Automatic Archives for an entry. When an Automatic Archive is ready to be made, **MicroWin 2000EX** connects to this entry's dialer if not already connected. It then records all the archive data from the dialer that hasn't been

received. After it is finished, if no other transfer actions are currently set, **MicroWin 2000EX** will disconnect from the dialer.

Appendix A – Troubleshooting

This section could be looked at when **Com Errors** are occurring.

Problem: When I try to connect **Local** to my dialer, **MicroWin 2000EX never** finds the dialer. What's wrong?

In This Order:
1) Make sure that no other program is using this ComM Port.
2) Make sure that the dialer is turned on and is a **S1000EX** .
3) Make sure that correct Com Port is setup as **Local** in **MicroWin 2000EX**.
4) Check to see if the serial cable from the computer's **Com Port** (**Not Parallel**) to the dialer's **Printer Port** is connected properly. **Don't** use a Null Modem.

Check the Setup:
1) The dialer's **Printer Port** could be setup to be used as a **Printer**. Using a touch-tone phone, press **0******50***. **If it says 'Printing Enabled', press 0******53***. Try connecting again.
2) Try and not move the mouse while it is connecting. If this solves the problem, it could be some conflict between the Com Port and the mouse Port.
3) Check for other **Com Port** conflicts on the computer.

Problem: When I try to connect with a **Modem** to my dialer, **MicroWin 2000EX never** finds the dialer. What's wrong?

If the modem goes to callout and the status says that it has an error initializing the modem, then check the initialization strings for the modem.

If the modem calls out to the dialer and it sounds like the dialer doesn't answer (the call just rings):
1) a wrong phone number could be typed in
2) the dialer could be turned off or not plugged in
3) the dialer **Ring Count** could be set too high

If it sounds like the dialer answers the phone and immediately speaks its voice response, the dialer is probably in **Voice Answer Mode**. It should be setup in **Data Answer Mode**. (**0******581*****)**

Appendix B – Important Things to Remember

Enabling/Disabling an projects's automatic Snapshots and Archives only changes how the entry is handled while in **Polling Mode**. A user can still connect to a dialer whether these are enabled or disabled. While in **Polling Mode**, **MicroWin 2000EX** will still accept call-ins from the associated dialer.

Dialers that are to be called from **MicroWin 2000EX** need to be put in **Data Answer Mode** (**0**581***).

In order to accept a call-in from a dialer, **MicroWin 2000EX** must have made at least one call-out to that dialer and the dialer must have been sent the latest configuration.

An S1000EX dialer telephone number that is used to call **MicroWin 2000EX** must have the telephone escape code ***990** at the beginning of it so that **MicroWin 2000EX** will recognize that a dialer is calling it.

MicroWin 2000EX must have the Auto Answer Button enabled in order to receive a call from a dialer.

If **MicroWin 2000EX** is used to receive call-ins, it is important to configure each dialer with a unique **System Telephone Number**.

Appendix C – Answers to Frequently Asked Questions

Q. I have several dialers in my system that are setup to call MicroWin 2000EX, but I rarely receive any call-in data from them, even though I know that they are receiving alarms that should be triggering call-ins.

A. >It is possible that the Poll Intervals for the **MicroWin 2000EX** entries are too small compared to the number of entries in the system. This may be causing the dialers to get busy signals every time they try to make a call-in. Try setting your entry automatic callout intervals to a longer time.
>Also, check to make sure that the phone numbers used to call **MicroWin 2000EX** on your dialers have the ***990** telephone escape code. If this is not in the phone number, it will call **MicroWin 2000EX** but not communicate as a modem.

Q. My dialers are setup to call MicroWin 2000EX, but I have not received ANY call-in data from them, even though I know that they are receiving alarms that should be triggering call-ins.

A. Remember that Auto Answer must be enabled in order for **MicroWin 2000EX** to receive call-ins. Also remember that each Entry that you want to accept call-ins will need to be called out to at least once so that **MicroWin 2000EX** can record the ID from that dialer so it knows what dialer is calling it.
Make sure that your dialer has a system telephone number that is unique. This value must be present or call-in data won't be stored.
Again, check to make sure that the phone numbers used to call **MicroWin 2000EX** on your dialers have the ***990** telephone escape code. If this is not in the phone number, it will call **MicroWin 2000EX** but not communicate as a modem.

Q. I would like to operate MicroWin 2000EX to only answer incoming calls. How can I configure the system so that I am not calling out to the dialers, but rather only recording call-ins.

A. An entry can be stopped from making automatic callouts by disabling the automatic Snapshots and Archives of this entry. Even though this entry's callouts are **Disabled**, call-ins from its associated dialer will still be stored to this entry in **MicroWin 2000EX**. Remember that each entry must at least callout once to its associated dialer before **MicroWin 2000EX** will know which dialer corresponds to what entry.

Q. Call-Ins from many different dialers are coming in, but it seems to store the data in the wrong Entries. Why?

A. It sounds like your dialers don't have unique **System Telephone Numbers**. A dialer's System Phone Number is what gives a dialer its unique ID. This should be unique for each of the dialers in the **MicroWin 2000EX** system. **Note -** When you change a dialer's **Telephone (Fax Identification Number)**, you must first have **MicroWin 2000EX** call this dialer and after connecting, the configuration must be sent to this dialer before having the dialer make call-ins to it or the data will not be recorded.

USERS MANUAL ERROR REPORT

Error Description(s):

Reports of any errors found in the manual are appreciated. They can be mailed to:

MICROTEL
206 West Judge Perez Drive
Chalmette, LA 70043

Attention: **MicroWin 2000EX** Manual

Or Faxed to (504) 276-0574
e-mailed To Microtel2@aol.com